

## Perception of Pediatric Physicians' Attire by Children and Parents within General Pediatrics Practice in Saudi Arabia

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### Abstract

**Background:** Physicians' attire can play a critical factor in patient-doctor relationship. Such relationship is necessary to improve healthcare outcomes and eventually lead to healthier children.

**Objective:** This study aims to assess perceptions of Saudi children and parents toward physicians' attire within inpatient general pediatrics settings. To our knowledge, no such assessment has been presented until now.

**Methods:** A questionnaire was adopted and evaluated by pilot study. Then, data were collected from parents along with certain demographic data within inpatients general pediatrics settings.

**Results:** Perceptions of attire differ according to physician's gender. Wearing scrubs was found more professional, approachable, and trust-worthy for male physicians by parents while wearing conservative long black skirts with lab coat perceived similarly for female physicians. However, wearing summer dress and Saudi traditional attire thought to jeopardies infection controls. Furthermore, children found these attires more intimidating. Although majority of parents thought wearing lab coat is necessary, most of children disagreed. Also, discordance in perception of decorated stethoscopes was observed. Surprisingly, tennis shoes were the preferred shoes for both male and female physicians.

**Conclusion:** Physicians' attire can be interpreted as indicator of professionalism which could impact patient-doctor relationship. Moreover, children can perceive physician attire differently from their parents.

**Keywords:** Physician attire; Scrubs; Formal attire; Lab coat; Tennis shoes

### Introduction

Physicians' attire can play a critical factor in patient-doctor relationship [1]. Such relationship is necessary to improve healthcare outcomes and eventually lead to healthier children. It means more than a fashion statement. It could be interpreted as indicator of professionalism, competency and trust-worthiness [2].

Physicians' attire and styles might be subject to cultural sensitivity [3]. Moreover, they also could be perceived differently according to gender and clinical practice [4,5]. In pediatrics, those attires have to consider not only the main patients, children, but also their caregivers [6]. In addition, those attires have to be less intimidating and child friendly [7].

In Saudi Arabia, assessment of physician-attire within adult outpatient clinics had un-expected results [8]. Formal Western attires were perceived most professional, even more than Saudi traditional costumes with no gender difference. To our knowledge, no such assessment has been presented to Saudi pediatrics society.

In this study, we aimed to assess perceptions of Saudi Arabia children and parents of physicians' attire within inpatient general pediatrics. This study explored traditions involvement, cultural norms and gender's role in such perceptions. The study stressed on which attire can improve child-doctor rapport and bonding in addition to their parents and caregivers.

Our hypothesis focused on three main domains. First domain: physician-attire might be perceived differently by children and their parents in Saudi Arabia's general pediatrics practice. Second domain: Such perceptions might be dependent on physician gender. Third domain of our hypothesis focused on importance of lab coat in child healthcare and how it might be alarming to children and their parents.

### Methods

#### Data collection and study population

Two questionnaires were adopted and evaluated initially by a pilot study of 20 participants from King Saud University Medical City's (KSUMC) General Pediatrics wards. First questionnaire was designed for surveying parents while the second utilized simpler language to meet children conceptual ability. The questionnaires were analyzed from clearness and easiness measures. Meanwhile, inclusion and exclusion criteria were finalized (Table 1).

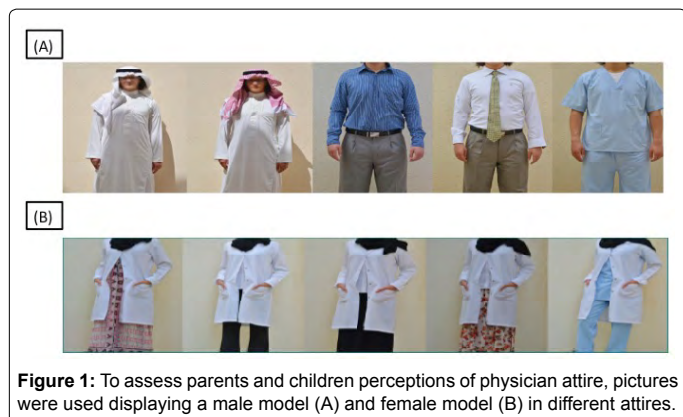
Questionnaires employed pictures to demonstrate five different attires for each gender (Surgical Scrub, formal western for male, smart-casual western for male, two traditional male dresses with different headwear, female conservative and formal attire, female formal suite-pants, colored skirt and female summer dress) (Figure 1). Mainly, eight variables were employed as measures of perceptions (professionalism, trust-worthiness, likely to follow recommendations, knowledgeable, approachable, pose risk of infection, confidant, and amenable). Additionally, perceptions of wearing a lab coat were scrutinized in

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**Received** October 31, 2016; **Accepted** November 29, 2016; **Published** December 02, 2016

**Citation:** Alnasser Y, AlSaeed H, Al-Beeshi NZ, Al-Sarraj H, Alotaibi H, et al. (2016) Perception of Pediatric Physicians' Attire by Children and Parents within General Pediatrics Practice in Saudi Arabia. J Health Educ Res Dev 4: 199. doi: 10.4172/2380-5439.1000199

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**Figure 1:** To assess parents and children perceptions of physician attire, pictures were used displaying a male model (A) and female model (B) in different attires.

Inclusion Criteria	Exclusion Criteria
Parents of any child admitted to general pediatric wards	Any child younger than 6 years
Child has to be six years or older	Non-communicative children
Informed consent obtained from caregivers with children's asset	Children with improper cognitive function
Patient of Saudi citizenship	Exclude any child who his/her caregivers were interviewed first

**Table 1:** Shows used inclusion and exclusion criteria in the presented study.

both parents and children populations. Effect of wearing jewelries and type of footwear in both gender were included in the designed questionnaires. Furthermore, role of decorating stethoscope with toys was inspected.

Parents and children were allowed to choose pictures that best express their opinions. Other questions asked them on a 3-point scale (0=do not bother, 1=no, 2=yes) to advise whether lab-coats, shoes, and specific types of stethoscopes were favored for physicians.

### Statistical analysis

A simple convenience sample were targeted allowing the children and their parents to enroll themselves electively into the study using an electronic survey designed online by using dedicated iPad for this purpose. Data were compiled into an excel sheet and were analyzed using commercial software SPSS, IBM version 20. Percentages and counts were used to describe categorical variables, and a chi-squared ( $\chi^2$  goodness-of-fit test) was used to explore our hypothesis. We assumed that participants would select each type of attire, footwear, stethoscope, and lab coat equally. So, no prior assumption on how selections would be distributed. Thus, an equal opportunity of selection was presumed for each question and the test were carried out accordingly.

### Research ethics

An informed consent was sought from each respondent adult and guardian with children's assent to answer the questionnaire completely and the study has an IRB approval. All authors disclosed no conflict of interest during study design, data collection, results analysis, and manuscript preparation.

## Results

### Parents and children population

Most of participated parents were females (91.9%). All of surveyed women were biological mothers. Majority aged between 20-30 years (45.5%). Their Educations were almost equally distributed between less than high school, high school diploma and university degree or

higher (Table 2). Children aged between 6-12 years. Boys were double the number of girls (Table 3).

### Male physicians' attire perceptions

Scrub was selected by majority of parents as favorable attire in general pediatrics settings. It was perceived as most professional, trust-worthy, likely to follow recommendations, knowledgeable, approachable, confidant, and amenable. Additionally, children selected scrub as most friendly, trust-worthy, amenable, least to pose risk of infection, likely to follow recommendation and best doctor in general. However, children saw official western attire as least intimidating. Surprisingly, traditional attire with red headwear (shamag) was the most intimidating and carried highest risk of infection in eyes of children. In contrast, casual western attire was presumed to affect infection control by parents (Figure 2).

### Female physicians' attire perceptions

Conservative formal attire including simple long black skirt with a lab coat was chosen by most of parents as favorable attire by all measured variables. Instead, children thought wearing scrub by female physicians is an indicator of being a better doctor, more trust-worthy, amenable and the friendliest. However, children were more likely to follow recommendation of conservative formal attire. Summer dress was selected to pose highest risk of infection by both parents and children. Furthermore, children saw it as most intimidating attire for female physicians (Figure 3).

### Importance of lab coat

Most parents admitted that wearing lab coat by their child's doctor is preferred (88.9%). However, majority did not care if lab coat was buttoned or not (54.5%). Dissimilarly, children believed lab coat is not necessary (71.9%).

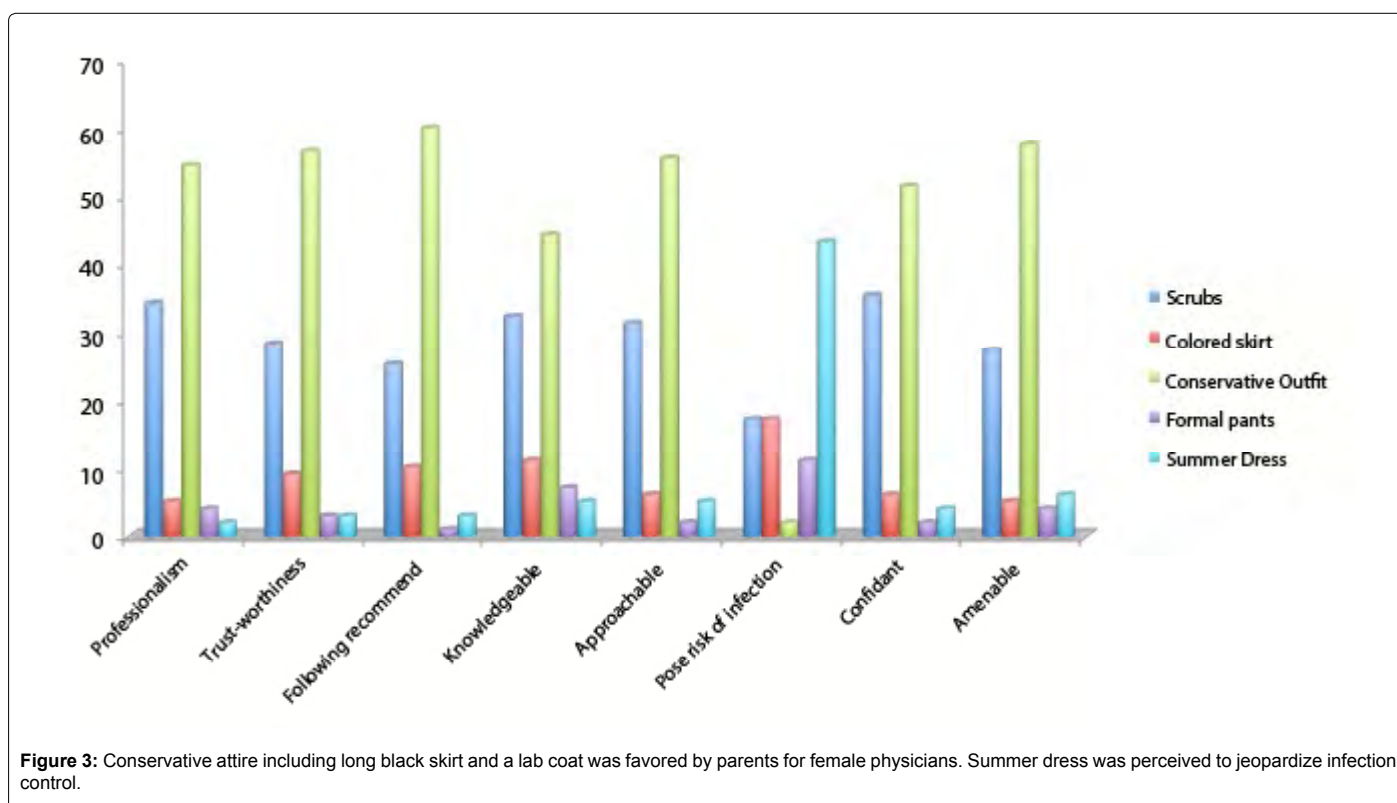
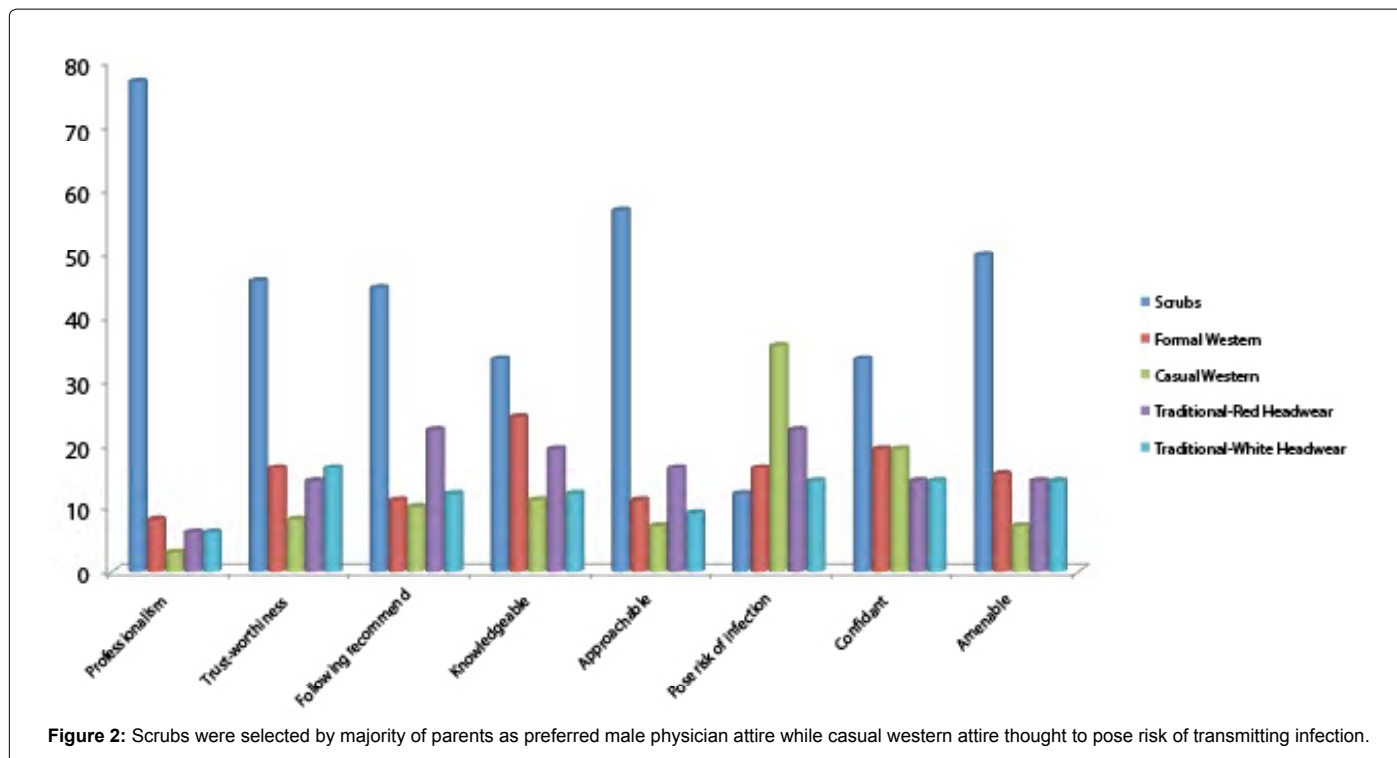
### Jewelries, stethoscope, shoes, and nametags

Although parents were more accepting of female physicians' jewelries, they were less tolerant to male physicians' jewelries especially bracelets (Table 4). While parents appreciated, physicians decorating their stethoscope with toys, children preferred standard stethoscope. Unexpectedly, parents and children favored Tennis shoes for both male and female physicians (Figure 4). Majority of parents valued having nametags by physicians (92%).

## Discussion

Patient-doctor relationships are essentials in building partnerships to reach a common goal: healthier children [9]. Such relationships can be established by trust and certain competencies. Indeed, physician attire can serve as an indicator of those desired competencies and improve patient-doctor relationship [10].

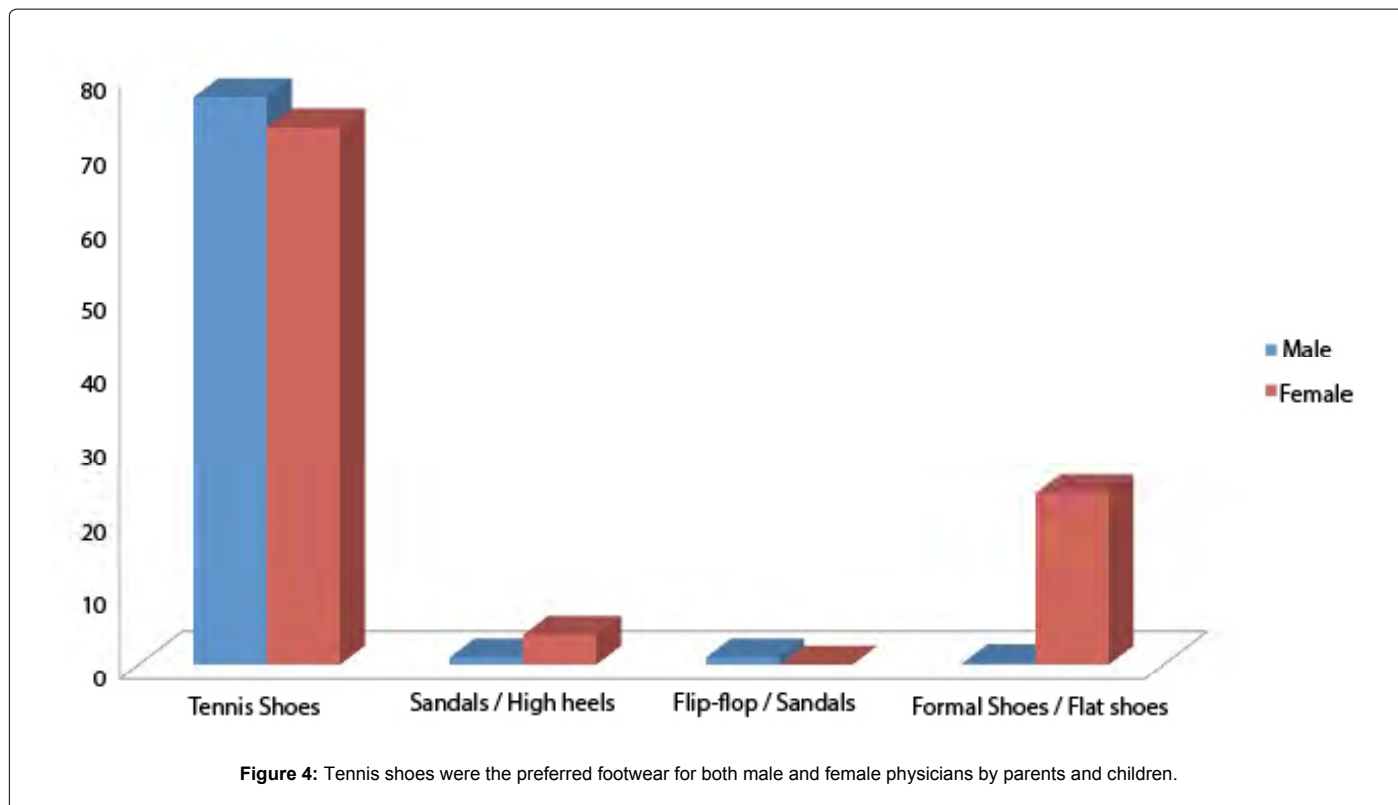
Unpredictably, scrubs were perceived as favorable attire for male physicians by parents and children in inpatient general pediatric settings. These surprising results have not been documented before in such settings as far as we know. Undeniably, scrubs were desired dress code in other setting and specialty [11]. Nonetheless, such attire was not chosen in previous researches involving general pediatric settings [6]. But, physician attire perception differs according to geography and culture [12]. However, adult perceptions in surgical and non-surgical settings in Saudi Arabia showed formal western attire is preferred [8,13]. This study is the first to document pediatric physician attire perceptions within Saudi Arabia to our knowledge. As practice settings



play critical role in such perceptions [14], this could explain our unanticipated findings.

Female physicians were perceived as more competent if they wear formal conservative attire by parents. This supports earlier results in

outpatient adult settings in Saudi Arabia [8]. When children were asked, they choose scrubs as indicator of best female doctors. Also, children found summer dress attire and male traditional attire with red headwear most intimidating for female and male physicians, respectively. Although these were statistically significant results, it



	Count	Percentage
<b>Gender</b>		
Mother	91	91.9
Father	8	8.1
<b>Age</b>		
Less than 20	3	3
20-30 years	45	45.5
30-40 years	32	32.3
More than 40 years	19	19.2
<b>Education</b>		
Less Than High School	32	32.3
High School	32	32.3
University Degree and Higher	35	35.4

**Table 2:** Distribution of Education between less than high school, high school diploma and university degree or higher.

	Count	Percent
<b>Age</b>		
6-8 Years	13	39.4
9-10 Years	11	33.3
11-12 Years	9	27.3
<b>Sex</b>		
Male	22	66.7
Female	11	33.3
<b>Education</b>		
First to Third Class	19	57.6
Fourth to Sixth	7	21.2
Intermediate	7	21.2

**Table 3:** Children characteristics. N=33 child.

is hard to rationalize such selections. We speculate that preferred male and female physicians' attire were elected based on being the commonest used attire by physicians in our hospital.

Parents selected male casual western attire as posing highest risk for transmitting infections. Entertainingly, such attire without a lab coat has been recommended as best attire to minimize nosocomial infections [15]. On the contrary, children nominated traditional attire with red headwear and summer dress to jeopardize infection controls for male and female physicians, respectively. This could be explained by how children found these particular attires the most intimidating.

Lab coat was important attire in parents' views while children thought it is not necessary. Lab coat has been thought to terrorize children by many pediatricians [7]. Nevertheless, previous researches showed that parents and children prefer it [16,17]. This study reported new evidence of discordance of parents and children opinions on value of lab coat in child healthcare.

Parents and children agreed that tennis shoes are favored in general pediatrics settings for both male and female physicians. This finding does not support earlier perceptions of surgical and non-surgical adult physician's footwear in Saudi Arabia [8,13]. Even perceptions of pediatric physicians in other countries were in contrast to our findings [7]. This is another proof of cultural and geographical impacts on perceptions of physicians' attire. Additionally, cultural, and geographical sensitivities were evident in perceptions of wearing jewelries by physicians. Although wearing jewelries is not recommended as they pose risk of transmitting infections [15], parents were more accepting of male physicians' rings and female physicians' jewelries in general. When asked about nametags, majority of parents expressed their necessity. This finding supports earlier finding by Najafi et al. [3].

	Not True	I Don't Bother	True	$\chi^2$ (df=2)	p
A Male Physician Wearing rings affects quality of care?	25(25.3%)	28(28.3%)	46(46.5%)	7.82	0.02
A Male Physician Wearing Bracelets affects the quality of care?	15(15.2%)	24(24.2%)	60(60.6%)	34.36	<0.001
A Female Physician Wearing rings affects the quality of care?	35(35.4%)	20(20.2%)	44(44.4%)	8.91	0.012
A Female Physician Wearing Bracelets affects quality of care?	31(31.3%)	20(20.2%)	48(46.5%)	12.1	0.002
It is preferred that a Physician wears a lab coat?	4(4%)	7(7.1%)	88(88.9%)	137.64	<0.001
Lab coat's buttons are preferred to be always tucked.	7(7.1%)	54(54.5%)	38(38.4%)	34.61	<0.001
An ID badge is necessary to wear?	3(3%)	4(4%)	92(92.9%)	158.24	<0.001
Physicians Shoes affect his /her appearance.	15(15.1%)	18(18.2%)	66(66.7%)	49.64	<0.001
A Stethoscope with a toy icon is friendlier for children.	44(44.4%)	10(10.1%)	45(45.5%)	24.1	<0.001
The Physicians type of shoes affects the child's comfortability.	44(44.4%)	28(28.4%)	27(27.3%)	49.64	0.063

**Table 4:** Perceptions of physicians' jewelries by parents differed according to physicians' gender. Nametags, shoes, and type of stethoscope thought to play a factor in physicians' professional image.

## Conclusion

Perception of Physicians attire can be used as indicator of several competencies of pediatric physicians to improve child-doctor and parent-doctor relationships. There is a cultural impact on these perceptions in Saudi Arabia. Male physicians were found more competent if they wear scrub with tennis-shoes by both parents and children. Female physicians were perceived as better doctor if they wear conservative formal attire with tennis-shoes by parents while children saw scrub is more suitable attire for their female physicians within inpatient general pediatric settings. Although parents emphasized importance of lab coat, children did not find it essential in their care.

## Limitations

This study reports physician attire perception by parents and children in one teaching hospital. To generalize our data to cover Saudi Arabia, multicenter study needs to be employed. Another limitation was apparent in encouraging fathers to participate which was very challenging and not feasible. Moreover, displaying a picture of female physician model without a lab coat was not accepted by adult participants which demonstrates indirect evidence of importance of lab coat in parents' views especially for female physicians.

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