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**Provider Appearance: a survey of guardian and patient preference**

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science  
in Dentistry at Virginia Commonwealth University.

By

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## Abstract

### PROVIDER APPEARANCE: A SURVEY OF GUARDIAN AND PATIENT PREFERENCES

By J.D. Westphal, DMD

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Dentistry at Virginia Commonwealth University.

Virginia Commonwealth University, 2017

Thesis Advisor: Elizabeth Berry, DDS, MPH, MSD

Assistant Professor, Department of Pediatric Dentistry

**Purpose:** To understand guardian and child preferences for the appearance of their pediatric dentist. This was a cross-sectional descriptive study using survey methodology with patients and parents that attended the VCU Pediatric Dental clinic.

**Methods:** A total sample of 100 guardians and 97 pediatric patient participants completed the computer-based questionnaire. Four subjects were asked to pose for photographs wearing various combinations of attire (professional, casual, white coat, scrubs).

**Results:** Among guardians, 56% reported preferring a provider in scrubs, with white coat the second most preferred attire (39%) for their children. For pediatric patients, scrubs were still most often selected, but at a lower rate (43%). White coat remained the second most preferred option at 37%.

**Conclusions:** Children and parents have strong perceptions and preferences regarding their dentists' attire. The results of this study can be used, by providers, to improve the comfort, and acceptance of care by patients and guardians.

## Introduction

First impressions can be very important in establishing effective patient-doctor relationships, even more so as a pediatric specialist who will vie for acceptance of the guardian and patient during the same visit. In an ever changing and competitive pediatric dental market it is important to stay up to date on what the guardian deems acceptable as well as what the patient sees as appropriate. A key aspect of a dentist's day-to-day work is to aim to develop a trusting relationship with each and every patient that walks through the door. The patient population of a pediatric dentist is commonly a diverse and evolving collection of families. Depending on practice settings there can be a wide range of race, culture, personalities, disabilities, and, socioeconomic status. The development of trust between a child and their dental provider is important in pediatric dentistry where rapport with a child is needed to maintain the child's trust and attention for an exam and potentially restorative dental treatment requiring local anesthesia. Often times pediatric specialists are seeing a patient for the first time because the child has been referred from another provider and possibly have had a less than ideal or even a traumatic dental experience.<sup>1,2</sup> Research is needed to validate what types of factors create an ideal atmosphere for the patient, the guardian, and the pediatric dentist. We have decided to examine the attire of the dentist and see how that affects the pediatric patient as well as the guardian of the pediatric patient in a dental practice setting. This information can help assist practitioners decide how they want to present themselves and their staff to their individual patient population.

By understanding patient and guardian preference for pediatric dentist attire and appearance we can more fully assist the patient and guardian in happily accepting a dental home

and future restorative treatment. Attire was chosen as the research subject matter because it is usually the first thing the patient and guardians see when introduced to their dentist for the first time. Because fears have been shown to have their origination in childhood, it is logical to include children as a key component of this study.<sup>3</sup>

In medicine, studies have examined what makes pediatric patients comfortable and less anxious. Gonzalez et al. have found in a pediatric emergency room setting, parents/guardians were shown to prefer pediatric emergency physicians who wear formal attire, including white laboratory coat, and do not like casual dress with running shoes. Parents of patients with surgical emergencies were more likely to prefer doctors wearing surgical scrubs.<sup>4</sup> Another study performed in New Zealand by Lill et al. showed that patients preferred doctors to wear semiformal attire, followed by white coat, formal suit, jeans, and casual dress. They also showed that older patients have a more conservative preference in attire.<sup>5</sup> In another study performed by McCarthy et al. surprisingly showed 54% of children preferred a physician in a white coat, whereas only 35% of parents preferred the white coat and surprisingly did not confirm the popular belief that children are afraid of physicians in white coats.<sup>6</sup> For many years the dental professionals adopted the similar attire as a medical doctor until more research was performed in the dental field.

In 2009 a study was performed by Kuscu et al. where they tried to associate dentists' attire to dental anxiety in school children. The results showed that formal attire was the first preference, followed by child-friendly attire. However, the anxious child was observed to prefer the child friendly attire compared to the formal attire.<sup>7</sup> A study performed at the University of Minnesota School of Dentistry by Brosky et al. showed that the attire of the dental care provider affected the comfort and anxiety levels of patients, and that hairstyle, makeup, and jewelry

appeared to have little effect on patients' opinions of the dental care provider.<sup>8</sup> A cross-sectional survey performed by McKenna et al. in a dental hospital found that the majority of patients felt clinical attire was important and that they preferred dental professionals to wear name badges, and smart dress accompanied with a white coat.<sup>9</sup> Subramanian et al. performed a study to evaluate children's attitude and preferences toward dentists, the results showed that the children preferred their dentist to wear a white coat.<sup>10</sup> A study performed in 1998 by Matsui et al. to determine a young child's preference regarding appearance of their physician revealed that a white coat was important as well as name tags. A groomed mustache and groomed beard were also rated favorably. Open-toed sandals, clogs, and shorts were rated negatively, while parents were neutral with respect to hospital scrubs, blouse and skirt or dress, and shirt and tie.<sup>11</sup> In one study conducted by Lill et al. out of New Zealand, where they documented patients' preferred dress styles, they found that patients preferred doctors to wear semiformal attire, and the next most preferred styles were white coat followed by formal suit, jeans, and casual dress.<sup>5</sup> A study performed at the Virginia Commonwealth University Orthodontics Department by Kelly et al. surveyed parents regarding their preferences toward the attire of the orthodontist treating their child and showed that professional attire and scrubs were the most preferred over white coat and casual.<sup>12</sup> As demonstrated by the evidence reviewed here, there does not appear to be a consensus in the literature regarding patient and guardian preferences for the attire of their pediatric dentist.

Fear of dental treatment and dentists in general has been thought to be a major hindrance to the delivery of quality dental care.<sup>13</sup> Surveys indicate that between 5% and 6% of the population have a fear of the dentist while 16% of school age children have a fear of the dentist.<sup>14</sup> Fear of the dentist has been shown to be related to fears of flying, heights, and

enclosures.<sup>15</sup> Children with high amounts of dental fear are twice as likely to not make a dental appointment as compared to a child with little fear of the dentist.<sup>16</sup> Also, older children who have more control over their dental visits, may avoid the dentist all together because of the associated fear.<sup>16</sup> A dental office can often be associated with loud noises and a probability of pain, which can induce an increased level of anxiety for the pediatric patient. Research into the formation of dental fear a child has identified a number of etiological factors including those considered part of Rachman's three pathways: conditioning (as expressed in the child's dental pathology, the child's early dental trauma and his/her dentist's empathetic behavior); modeling, information pathway; and the dispositional factors (children's background and disposition).<sup>7,17</sup> By understanding the cause of the dental fear, a pediatric dentist can better the dental setting for an ideal doctor-patient relationship.

A key in determining treatment outcomes is a solid relationship between the pediatric dentist and the child; the first step in the right direction can be assumed to be the appearance of the pediatric dentist.<sup>7</sup> According to Desmond Morris, a human behaviorist, 'it is impossible to wear clothes without transmitting social signals. Every costume tells a story about its wearer'.<sup>18</sup> Psychologists have often contemplated the importance of physical appearance and the effects it has upon first impressions and interpersonal relationships.<sup>19</sup> Creating a strong rapport with the child on their initial visit will help in easing the child's fears by allowing a comfortable atmosphere where they do not feel threatened.<sup>20</sup> Children form an impression of their pediatric dentist prior to the commencement of any verbal communication based on grooming, clothing, and cleanliness. Patients will often record and analyze their every movement, word, and gesture.<sup>10</sup> Thus, it is key to create a strong rapport and establish a friendly relationship with the patient on their first visit and to assist in creating a comfortable atmosphere where the child does

not feel threatened.<sup>10</sup> Recent opinions are that children feel more at ease and less anxious with; or would prefer dentists who are dressed more casually. It has been hypothesized that children are afraid of doctors who wear a white coat, which would cause for a more difficult formation of doctor-patient trust.<sup>21</sup>

The appropriate appearance and attire for a physician has been debated and tested for many years. The perception of the physician has changed during the past century and can be seen by the changing use of a symbol of the profession, the white coat. Medical practitioners have traditionally worn a white coat, which has been a symbol of healing and authority for more than 100 years.<sup>22</sup> The attire of a doctor has formed over centuries by tradition and fashion. There have been major changes to the dental workforce and to the social expectations that have led to changes in the dentists' choice of attire. Another is a trend away from the dentist wearing the traditional white coat. Overall, dentists' dress style has been seen to be more on the casual side than in previous decades. Doctors first started wearing white coats in the late 19<sup>th</sup> century when science began to make a significant advance into medicine and physicians in turn adopted the laboratory coat as their own.<sup>22</sup> The initial purpose of the white laboratory coat was to protect the patient and physician from cross-contamination. However, as the partnership between science and medicine transformed hospitals from places where sick people go to die to institutions for curing the sick, the white coat became a strong symbol of the authority of science and the art of healing.<sup>23</sup> As the 20<sup>th</sup> century continued to advance, sociologists turned their attention to medicine and the dynamics seen in the relationship between the patient and doctor. Increasingly the white coat was seen as a barrier to effective communication.<sup>14</sup> In an attempt to dispel the perception of the white coat barrier, pediatricians and doctors in private practice have started to shed the white coat for a variety of different attire options.

Fear of the dentist and the anxiety associated with a dental visit are generally believed to be multifactorial and the etiologies connected to them are still not fully understood.<sup>24</sup> For parents the selection of a pediatric dentist is complex and multifactorial. The initial impression is a crucial moment in time in building a successful patient, parent, and pediatric dentist relationship. The parents need to feel comfortable with the pediatric dentist that will be treating their child, and the child needs to feel comfortable with the pediatric dentist to help alleviate their anxiety and promote a cooperative behavior. A pediatric dental office is unique because the person that selects the dental practice is usually not the person receiving the treatment, but rather the parent will choose the dental provider for their child.

An important connection is made during the first meeting between the patient and doctor where the patient forms an initial impression of the clinician.<sup>25</sup> Children often make judgments about their pediatric dentist based on the appearance of the dentist, and often analyze and record their dentist's every word, gesture, and movement during the initial dental examination.<sup>26</sup> A positive relationship between the child and the dentist can assist patients in coping with specific stimuli such as the sight of the anesthetic needle and the sound, sight, and sensation of the dental handpiece which has been shown to provoke anxiety.<sup>26</sup> As soon as the child is comfortable with their pediatric dentist and the dental environment, dealing with certain anxious situations will become easier, and this in turn will help in the delivery of effective and efficient treatment. The manner in which the dentist presents himself can play a pivotal role in assisting the child feel comfortable. Thus it is important that the pediatric dentists of the world to stay informed about the latest trends and what is acceptable to both patients and parents.

The purpose of this study was to examine the ideal attire for a pediatric dentist. The ideal attire would be something that appeals to both the parent's preferences for their child's health

care provider, and attire that allows the patient to feel comfortable and at ease during dental appointment.

**Aim 1:** To assess the child's preferences for their pediatric dentist's attire.

**Aim 2:** To assess the guardian's preferences for their child's pediatric dentist's attire.

**Aim 3:** To determine which attributes are associated with different types of attire.



## Materials and Methods

Three groups of subjects were involved in this study: 1) persons whose photographs were used for the computer based survey, 2) guardians of the pediatric dental patient, and 3) the pediatric dental patients. The photographed subjects chosen for this study were verified to have no affiliation with the VCU dental school. Guardian and patient subjects for this study were recruited from the Virginia Commonwealth University Pediatric Dental Clinic between May 2016 and September 2016, and were verified legal guardians of the patients. It was confirmed that guardians were comfortable with English. Patients were identified as possible study eligible subjects by ensuring that the patient's age was between 4-17 years, and that they could understand English enough to complete the study. A decision to participate or not participate in the study did in no way affect the care that was rendered for that particular patient. The Institutional Review Board at the Virginia Commonwealth University approved this study.

After the initial verification process, guardians and parents were presented with the initial information about the study, via verbal discussion and a printed copy, along with the consent form. Patients and guardians were allowed as much time as needed to read and discuss the questionnaire and whether or not they would like to participate.

For the computer-based questionnaire, a total of four model subjects were asked to pose for photographs wearing various combinations of attire (professional, casual, white coat, scrubs). Photographs of two different female subjects and two different male subjects were each shown dressed in the different attire options. All subjects were photographed with a standardized

physical stance, color of clothing, hairstyle, and facial expression (Figure 4). The models were chosen to include two male and two female representatives from the same age group (age 30-35). All four models were asked to sign an informed consent form giving authorization for the use of their photos in this study. Each subject photographed was informed of the purpose of the study and the potential use of their photographs in a scientific journal. Casual attire consisted of a short sleeve tee shirt of solid color and pants. Professional attire consisted of a white collared shirt and tie for the men and a button down blouse for women. The white coat used for the photographs was a standard issue coat provided by the VCU School of Dental Medicine. Both females used the same white coat and both males used the same coat as well. For the photographs of subjects wearing scrubs, all subjects wore navy blue colored scrubs that were issued by the VCU School of Dental Medicine. All photo subjects were volunteers that had no interaction or affiliation with any patients or faculty of VCU School of Dental Medicine. This was enforced to relieve any possible bias towards the research models and research subjects based on prior interactions.

Survey participants were presented with random ordered choice sets of a pediatric dentist wearing different attire and asked a series of questions (Appendix 1). Parents were asked to take the questionnaire prior to their children to allow the parents to verify appropriateness for their child.

Guardians were only permitted to take the survey once regardless of the number of children present during the dental appointment. The questionnaire for the guardian included a series of nine questions to be answered for each set of photographs. After the guardian finished the survey the child was then allowed to participate in the computer based survey after assent was obtained. Two questions were asked of the child for each individual photo set. The questions

were, which dentist would you want to be your dentist, and which dentist would you not want to be your dentist.

Children were not allowed to be in view of the computer while the guardian was taking the questionnaire so as to prevent any bias. After the guardian had finished the questionnaire the oldest child in the family, that was present at the time, was then asked to partake in the computer-based questionnaire as well. Proper assent was given by the patient to take participate in the questionnaire. Only one child per family was permitted to take the questionnaire to make for even numbers in our statistical comparisons. At the end of each survey patients and guardians finished with demographic questions regarding their age, race, gender, income level, ethnicity, and marital status (Appendix 2).

Study data were collected and managed using REDCap electronic data capture tools hosted at Virginia Commonwealth University.<sup>27</sup> REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies. Results were automatically recorded and password protected within the REDCap survey computer program. Only the statistician and principal investigator had access to the REDCap computer program. No identifiers were used or recorded during this study thus there was no ability to match guardians with children during the analysis of collected data.

Differences between guardian's preference for their own provider and the provider for their children were assessed using McNemar's chi-squared. Differences between guardian's preference for their children's provider and children's own preference were assessed with chi-squared test. Differences in preference by gender were determined using chi-squared tests. Differences in preference by age were determined using a repeated measures ANOVA. Post hoc pairwise comparisons were adjusted for using Tukey's HSD. Additionally, differences in

preference across the image sets was assessed using chi-squared tests. A significance level of 0.05 was used for all analyses.

## Results

A total of 100 guardians and 97 pediatric patients completed questionnaires (three children opted out of the survey because of time constraints). Average age of respondents was 38.2 years for guardians (range: 25-63), and 10.6 years for pediatric patients (range: 4-17). In terms of gender, 83% of guardians were female and 48% of pediatric patients were female. Guardians self-reported 52% African American and 36% Caucasian, while pediatric patients reported 57% African American and 31% Caucasian. Complete demographics are presented in Table 1.

Among guardians, 56% reported most preferring a provider in scrubs, with white coat the second most preferred attire (39%) for their children. For pediatric patients, scrubs were still most often selected (43%), but at a lower rate. White coat remained the second most preferred option at 37%. Professional and Casual attire were more preferable for children than adults (2 vs 6% and 3 vs 12%) respectively. Overall, the preferences guardians reported for their children and what children self-selected were significantly different ( $p\text{-value}<0.0001$ ). Parents were less likely to select casual (12% vs 3%) and professional (6% vs 2%) and more likely to select scrubs (56% vs 43%). Full results are given in Figure 1. Additionally, parents were asked which provider they preferred for their own care. There were significant differences in preference for self and child ( $p\text{-value}<0.0001$ ), with guardians most preferring white coat for themselves (56%) and most preferring scrubs for their child (56%). Preferences for guardians (self and child), and children were independent of the images they were viewing ( $p\text{-values: guard: self}=0.6976$ ,  $\text{guard: child}=0.7642$ ,  $\text{child}=0.6274$ ).

The least preferred attire was casual for both guardians and children (59% and 52% respectively). There were still significant differences between the two groups ( $p$ -value $<0.0001$ ), predominantly driven by the difference in selection of professional attire between guardians (16%) and children (26%). Full results are given in Figure 2.

Guardian gender was not associated with preference for own provider or for their child's provider ( $p$ -value=0.3691, 0.6908, respectively). There was no evidence of a difference in average age across the different preferences for self or child's provider ( $p$ -value=0.8736, 0.4571 respectively).

A child's gender was not associated with their preference in providers ( $p$ -value=0.8571). However, children who selected casual attire or professional attire were significantly younger than those who selected scrubs or whitecoats (Table 2). The average age for children selection casual or professional attire was 7, compared to an age of 11 for those selecting scrubs or white coat. When looking at preference by age, the most notable difference is that 64% ( $n=9/14$ ) of 4-year-old respondents selected casual attire, while casual was preferred by 0-30% in all of the other ages.

Guardians were also asked to select which individual they expected to be the most knowledgeable, most caring and compassionate, most confident and in control, whose advice they are most likely to follow, and who they trust the most to treat their child. Responses to these questions may provide some insight into the guardian's selection for the most preferred provider (Figure 3). Guardians, who were most likely to select scrubs for their child's provider, were also most likely to select a provider in scrubs as the most caring and compassionate (58%). Providers in white coats were most likely to be selected as most confident and in control (68%), most knowledgeable (73%), and whose advice they are most likely to follow (66%). Guardians

selected white coat and scrubs with similar frequency as the most trust worthy (48%, 45% respectively).

## Discussion

This study validated the idea that children and guardians both have strong preferences and perceptions regarding their dentist and their dentist's attire. Pediatric dentists require the use of many different techniques to reduce potential anxiety. A few of the techniques needed to assist in decreasing the patients anxiety can include tell-show-do, voice control, and distraction during treatment. The child-friendly approach to a dental environment design is also available to assist children in adapting to and cooperating with dental treatment.<sup>28</sup> The clinicians appearance is also considered to have an effect on a patient's understanding and perception of the dental environment, which in turn will affect the ever important doctor-patient relationship.<sup>29,30</sup> Non-verbal communication in the form of a dentist's attire can have a major role in the child-dentist relationship. The motivation for identifying children and parent's attitudes towards their dentist is to make positive changes that could assist children in feeling more comfortable in the dentist's office and in turn improve the overall quality of the dental visit. Many researchers have tried to identify environmental factors that have an impact on the dental patient's attitude toward the dental appointment and the dentist themselves.

Mckenna et al. examined different patients' thoughts regarding the clinic attire of a dentist, cross-infection control measures, and name badges and found that a majority of patients believed clinical attire to be important.<sup>9</sup> An important study conducted by Brosky et al. looked at how patients perceived the professionalism of dental students and discovered that patient confidence levels were influenced by the first impression of their student doctor and that their



anxiety levels were influenced by the attire of the dental provider.<sup>8</sup> Panda et al. stated that children have very strong preferences and perceptions related to their dentist's appearance, which has an effect on the first impression of the pediatric patient.<sup>29</sup> Therefore, in pediatric dentistry, care should be taken to combat all possible causes of anxiety levels in pediatric patients.<sup>31</sup> There have been many different studies carried out over the years trying to further understand the role of professional attire in the provider-patient relationship. In a study by Tibdewal et al. both patients and dentists were asked about their preferences regarding the use of the white coat. It was found that patients thought that a dentist should wear a white coat for easy identification, with the older patients being more inclined to prefer the white coat than younger patients.<sup>31</sup> Similar results were found in a similar study performed by Douse et al.<sup>32</sup> A study performed by Menahem and Shvartzman also showed that more than half of the participants preferred doctors to wear a white coat, with a higher preference among the older patients.<sup>30</sup> Our study confirmed these findings that adults more often than not, preferred a traditional white coat to be worn by their dentist (56%). This idea was even confirmed in the pediatric patient population where the older pediatric patients preferred the white coat and scrubs attire with a mean age of 11.2 years of age for each, while a significantly younger pediatric patient preferred professional or casual attire for their dentist at a mean age of 7.7 and 7.1 years respectively. A possible reason for this outcome could be that the older patients have had more frequent positive interactions with adults wearing scrubs or a white coat over the year's e.g. positive physician experiences and dental exams. While the younger children, who preferred professional or casual attire, have had more positive experiences with adults wearing these types of attire e.g. school teachers and family friends. When looking at preference by age, the most notable difference is that 64% (n=9/14) of 4-year-old respondents selected casual attire, while casual was preferred by

0-30% in all of the other ages. However, our study showed that most guardians (56%) preferred their child's dentist to wear scrubs more so than the white coat (39%) with casual and professional attire coming in 3<sup>rd</sup> and fourth respectively at 3% and 2%. Most of the studies, including the above-mentioned studies, were performed with adult patients and indicate that they expect a formally dressed dental health care provider.

Very few studies have examined the child's preferences regarding dentists' or doctors' attire. The few papers that are available have shown contradictory results. For example, Cohen et al. found that children aged 2-15 years old, were not affected by the type of attire worn by their dentist. However, the author suggested informal attire for a dentist as a way of making the children feel more comfortable in the dental office.<sup>33</sup> Marino et al. proposed an opposing view on informal attire for a doctor treating children. In their study they compared formal versus informal attire and noted children may have negative impressions about informal attire.<sup>34</sup> Matsui et al. suggested in their study that physicians should wear a white coat without fear of negatively affecting their relationship with their patients that are 4-8 years of age.<sup>11</sup> In a study performed by McCarthy et al. no evidence was found to solidify the popular belief that children are afraid of physicians dressed in a white coat.<sup>6</sup> Similar to these studies, our study found that children were not afraid of the white coat or did not have what is popularly known as "white coat syndrome." As a matter of fact our study showed that the white coat was the second most preferred attire chosen by the child for their dentist at 37% with 43% in favor of scrubs for their dentist's attire. Although the white coat was not the first choice for the child's dentist, it was a close second choice. Children surveyed in our study did not want their dentist to wear casual attire or professional attire; which were preferred as the third and fourth choice respectively out of the four total choices at 12% and 6% respectively.

Parents of the pediatric patient were shown to prefer the dentist dressed in the white coat (56%) when asked their preference for their own dental care. However, when asked what type of attire they would prefer for their child's dental care they chose the scrubs attire (56%). One aspect that might have contributed to the parents choosing a pediatric dentist in the scrubs attire could be due to the fact that when parents were asked which dentist seemed to be more caring and compassionate, the majority (58%) chose the pediatric dentist dressed in scrubs. Which leads us to believe that parents value a caring and compassionate dentist over trustworthy, in control and confident, knowledgeable, and someone who's advice they are most likely to follow.

The attributes that were associated with the different attire sets are of importance when a dentist is trying to convey a certain atmosphere for the family. When parents were asked which dentist they would not want seeing their child the majority said that they did not want the casual attire for their child's dentist (59%). When asked which dentist they would trust the most while treating their child they chose the white coat with the scrubs coming in a close second place. When asked whose advice they would be most likely to follow, the majority of the parents said that the doctor wearing the white coat would be the dentist they would choose (66%). The same was seen when asked which dentist they would be more likely to return for follow-up care with, which dentist would be expected to be the most knowledgeable (73%), and which dentist would be confident and in control (68%). Interestingly enough the one circumstance where parents did not prefer the white coat over the other options was when asked which dentist would be expected to be the most caring and compassionate the majority of the parents chose the dentist wearing scrubs (58%).

The information obtained from this study can be valuable for a pediatric dentist that is trying to optimize their practice by making all parties feel comfortable and confident with the

care being rendered. A happy parent who is confident in the doctor's abilities to treat their child, as well as an anxiety free child who is able to accept any needed treatment is something all pediatric dentists strive to achieve. By knowing that parents (56%) and children (43%) would prefer a pediatric dentist wearing scrubs for the attire can impact what a dentist wears on the day of the treatment. Similarly, by knowing that parents chose the white coat as the preferred attire when asked about which individual they expect to be most knowledgeable, most confident and in control, whose advice they are most likely to follow, and who they trust the most to treat their child, we can then suggest that pediatric dentists wear a white coat when first coming into contact with the parent. The scenario where this could be beneficial for the pediatric dentist would be for the pediatric dentist to have a white coat for their pictures on their website, because this is where a lot of first interactions take place between the doctor and parent. As stated previously, first impressions are very important to build confidence and rapport. Therefore, the first impression for the parent would ideally be while the dentist is wearing a white coat (doctors website) and the first impression for the child would be the first office visit where the dentist would ideally wear scrubs to make the patient more comfortable.

Future studies should address and identify new patients who have not had any previous dental work completed before, so as to negate any potential bias. Also, it should be encouraged for future investigators to focus on different aspects of the pediatric dental attire that can actually be changed, such as hairstyle, clothing color, presence of name tag, etc. Many studies survey individuals for their preferences toward female versus male pediatric dentists, or preference toward older versus younger pediatric specialists. This, in our opinion, is not useful information due to the fact that it is not actionable since a pediatric dentist cannot easily change these preferences to accommodate the patient or guardian. Studies similar to this study should be

performed every 3-5 years because just as fashion changes so will the opinions of parents and patients. Different areas of the world will have different norms and standards for attire, thus future research should be performed in different areas of the world to better understand patient and guardian preferences. In the future more options of attire may be added to the survey to accommodate the current trends in dentists attire. Also, future studies should focus on the recruitment of equal numbers of younger patients, adolescents, and teenagers since evidence suggested preferences differed between younger children and adolescents.

## Conclusions

The purpose of the study was to more fully understand both guardian and child preference for appearance of their pediatric dentist. Despite many important advances in pediatric dentistry, a big challenge still remains for any pediatric dentist, and that challenge is to limit anxiety related to an office visit and to assist the child in accepting treatment willingly. The way in which pediatric dentists present themselves can play an important role in solidifying a long-term, trusting relationship. This area of study is of utmost importance in establishing a quality dental home for both the guardian and child by allowing pediatric dentists to more fully understand what both the guardian and patient want from their dentist's appearance to help them feel more confident and comfortable in the dental setting. First impressions can be very important in establishing effective patient/doctor relationships, even more so as a pediatric specialist who will battle for the acceptance from both the parent/guardian and patient. In an ever changing and competitive pediatric dental market it is important to stay up to date on what the parent/guardian sees as acceptable as well as what the child/patient sees as appropriate. Thus, the primary aim of this study was to first and foremost assist the pediatric patient population in feeling more comfortable while in the dental chair by assessing the preferences of a pediatric dental patient. A secondary aim was to assess the guardian's preferences for their child's pediatric dentist's attire. A tertiary aim was to determine which attributes are associated with the different types of attire. This information can help practitioners decide how they want to present themselves, and their staff, to their specific patient population. The results obtained from this study demonstrated that, in

contrast to what is widely believed, most children preferred the dentist to wear scrubs or a white coat when compared to casual attire and formal attire. The results also showed that guardians have definite and specific attitudes towards the dentists' attire for their own dental care, and a different preference for the dentist who is treating their child. Most parents (56%) wanted their children to be seen by a pediatric dentist wearing scrubs, while for their own care would prefer (56%) a dentist who wears a white coat. Different attires are associated with specific attributes when surveying guardians regarding the treatment of their child.

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## Tables

**Table 1: Sample Demographics for Parent/Guardian and Pediatric Patient Respondents**

	Guardians	Pediatric Patients
<b>Average Age</b> (mean, SD)	38.2 (8.06)	10.6 (3.96)
	<b>n (%)</b>	
<b>Gender</b> (Female)	83, 84%	47, 48%
<b>Race*</b>		
African American	52, 52%	55, 57%
Caucasian	36, 36%	30, 31%
Asian	6, 6%	4, 4%
Other and Multiracial	12, 12%	9, 9%
Not Reported	3, 3%	3, 3%
<b>Ethnicity</b> (n=92)		
Hispanic or Latino	9, 10%	11, 11%
Not Hispanic or Latino	72, 78%	82, 85%
Unknown or not reported	11, 12%	3, 3%

\*Race was “check all that apply” and may add up to more than 100%

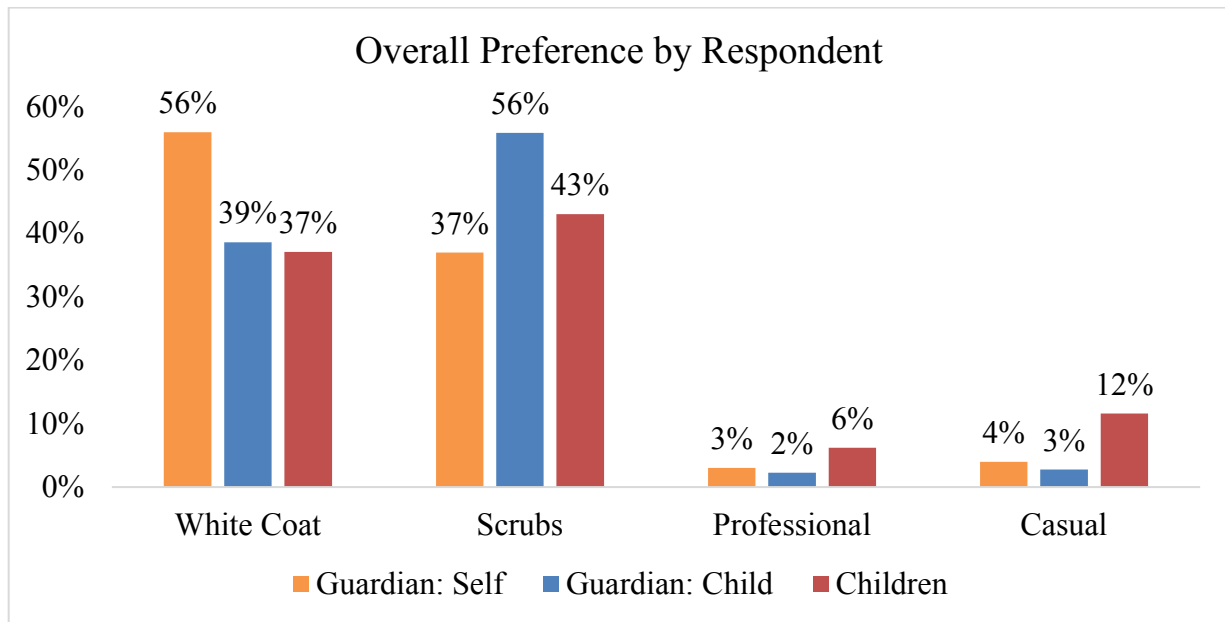
**Table 2: Average Age by Preference in Provider**

Preference	Age		
	Mean	SE	
White Coat	11.2	0.30	A
Scrubs	11.5	0.28	A
Professional	7.7	0.74	B
Casual	7.1	0.54	B

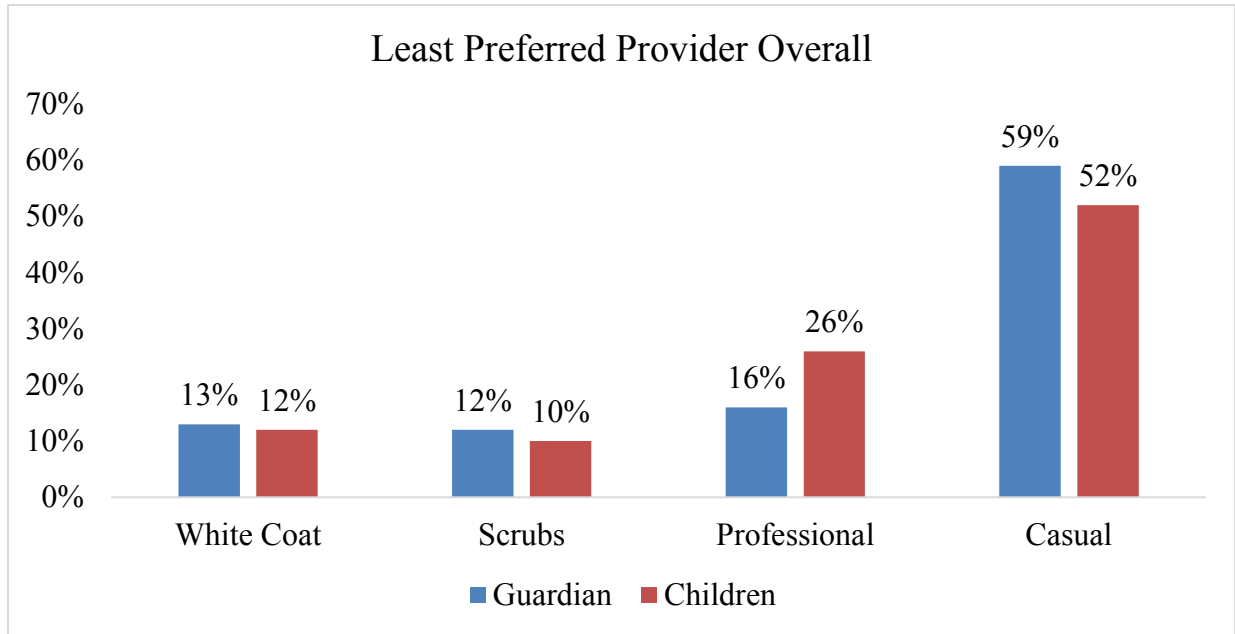
\*Letters correspond to results from Tukey's HSD adjusted post hoc pairwise comparisons; items with different letters are significantly different

## Figures

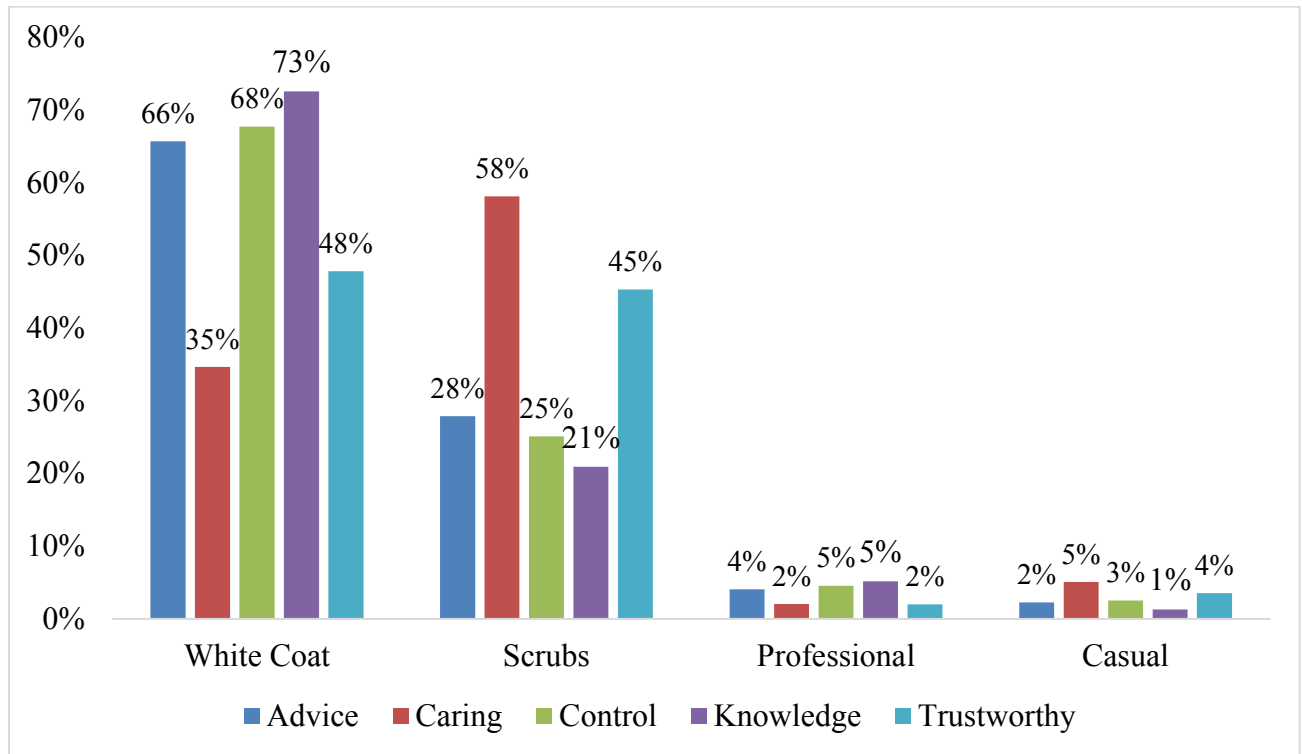
**Figure 1: Preference by Respondent Type**



**Figure 2: Least Preferred by Respondent Type**



**Figure 3: Relationship Between Attire and Character Attributes as Perceived by Guardians**



**Figure 4: Research Models**



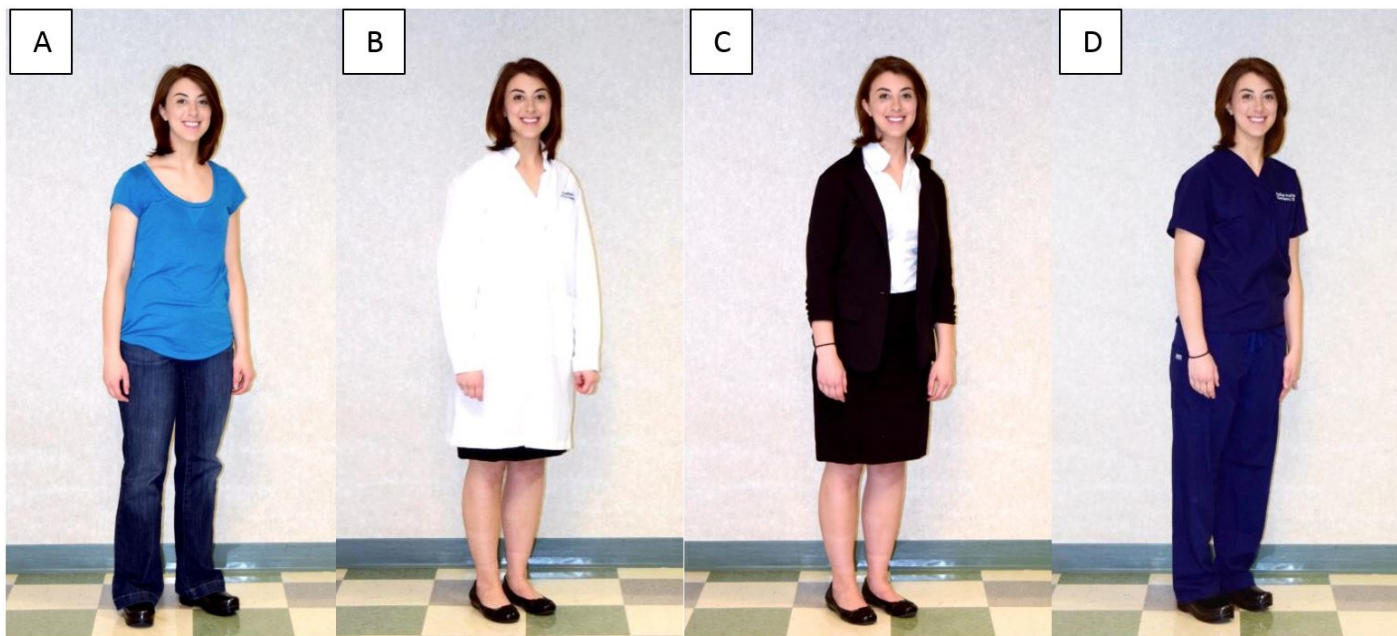
## Appendix: Surveys



# Pediatric Dental Survey

Please complete the survey below.

Thank you!



- 1) Which dentist would you prefer for your child's dental care?  
 A  B  C  D  None of the above
- 2) Which dentist would you NOT want to treat your child? Check all that apply.  
 (Check all that apply)  
 A  B  C  D
- 3) Which dentist would most prefer for YOUR OWN dental care?  
 A  B  C  D  None of the above
- 4) Which of these dentists would you trust the most while treating your child?  
 A  B  C  D  None of the above
- 5) Whose advice are you most likely to follow?  
 A  B  C  D  None of the above
- 6) Which of these dentists would you return for follow-up care with? Check all that apply.  
 (Check all that apply)  
 A  B  C  D  None of the above

7) Which of these dentists would you expect to be the most knowledgeable?

- A  B  C  D  None of the above

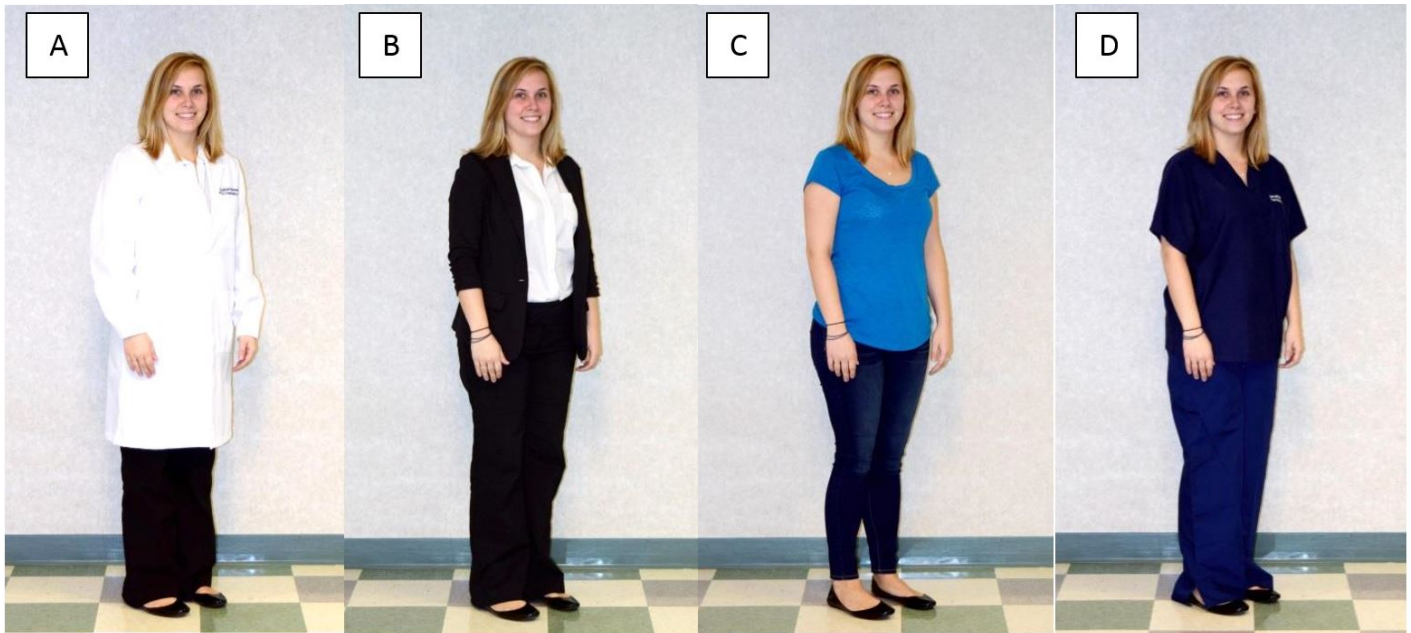
8) Which of these dentists would you expect to be the most caring and compassionate?

- A  B  C  D  None of the above

9) Which of these dentists would you expect to be most confident and in control?

- A  B  C  D  None of the above

## Section 2 of 5



- 10) Which dentist would you prefer for your child's dental care?
- A  B  C  D  None of the above
- 11) Which dentist would you not want to treat your child? Check all that apply.  
(Check all that apply)
- A  B  C  D
- 12) Which dentist would prefer for YOUR OWN dental care?
- A  B  C  D  None of the above
- 13) Which of these dentists would you trust the most while treating your child?
- A  B  C  D  None of the above
- 14) Whose advice are you most likely to follow?
- A  B  C  D  None of the above
- 15) Which of these dentists would you return for follow-up care with?
- A  B  C  D  None of the above
- 16) Which of these dentists would you expect to be the most knowledgeable?
- A  B  C  D  None of the above

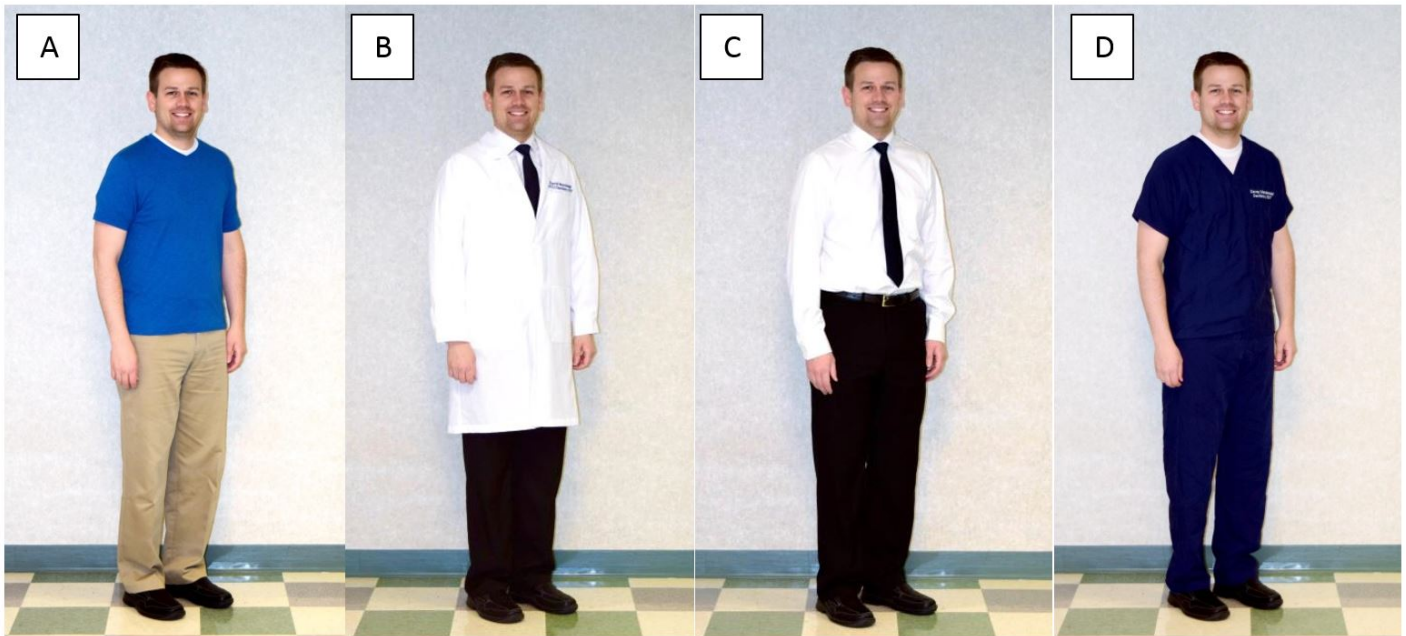
17) Which of these dentists would you expect to be the most caring and compassionate?

- A  B  C  D  None of the above

18) Which of these dentists would you expect to be most confident and in control?

- A  B  C  D  None of the above

## Section 3 of 5



- 19) Which dentist would you prefer for your child's dental care?
- A  B  C  D  None of the above
- 20) Which dentist would you not want to treat your child? Check all that apply.  
(Check all that apply)
- A  B  C  D
- 21) Which dentist would prefer for YOUR OWN dental care?
- A  B  C  D  None of the above
- 22) Which of these dentists would you trust the most while treating your child?
- A  B  C  D  None of the above
- 23) Whose advice are you most likely to follow?
- A  B  C  D  None of the above
- 24) Which of these dentists would you return for follow-up care with? Check all that apply.  
(Check all that apply)
- A  B  C  D  None of the above
- 25) Which of these dentists would you expect to be the most knowledgeable?
- A  B  C  D  None of the above

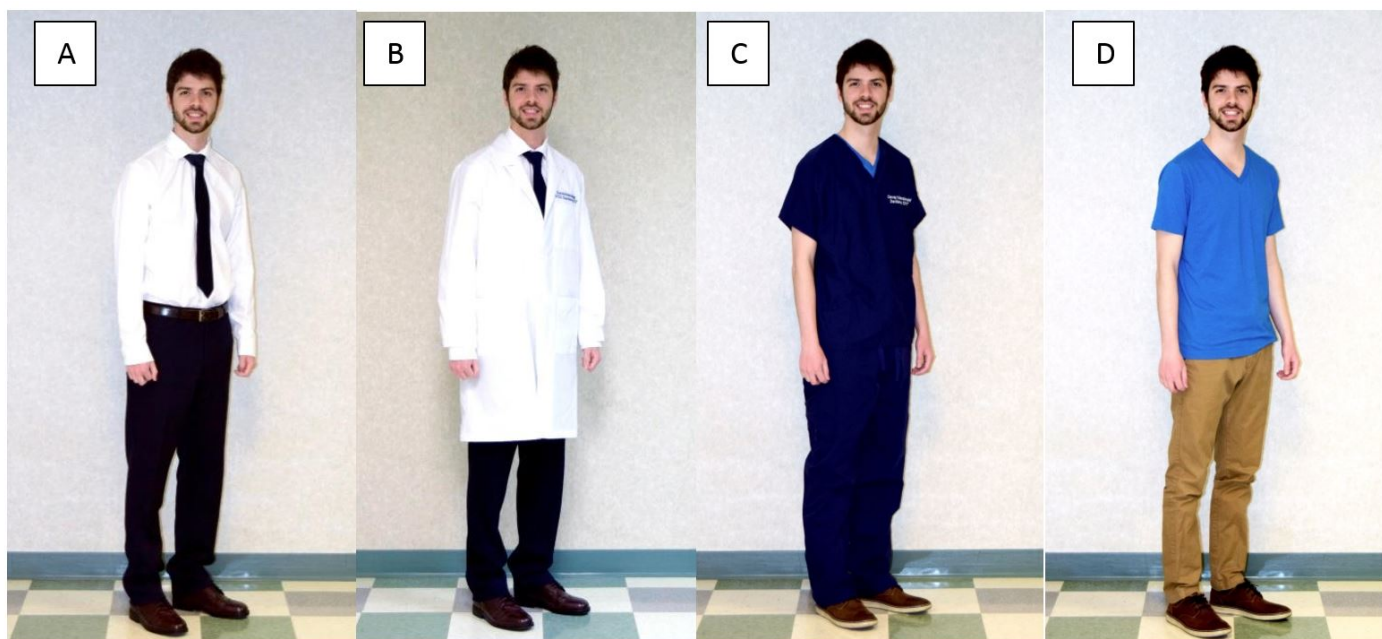
26) Which of these dentists would you expect to be the most caring and compassionate?

- A  B  C  D  None of the above

27) Which of these dentists would you expect to be most confident and in control?

- A  B  C  D  None of the above

## Section 4 of 5



- 28) Which dentist would you prefer for your child's dental care?
- A  B  C  D  None of the above
- 29) Which dentist would you not want to treat your child? Check all that apply.  
(Check all that apply)
- A  B  C  D
- 30) Which dentist would prefer for YOUR OWN dental care?
- A  B  C  D  None of the above
- 31) Which of these dentists would you trust the most while treating your child?
- A  B  C  D  None of the above
- 32) Whose advice are you most likely to follow?
- A  B  C  D  None of the above
- 33) Which of these dentists would you return for follow-up care with? Check all that apply  
(Check all that apply)
- A  B  C  D  None of the above
- 34) Which of these dentists would you expect to be the most knowledgeable?
- A  B  C  D  None of the above

35) Which of these dentists would you expect to be the most caring and compassionate?

- A  B  C  D  None of the above

36) Which of these dentists would you expect to be most confident and in control?

- A  B  C  D  None of the above



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**Demographics**
**Section 5 of 5**

37) Gender

- Male  
 Female

38) Age

\_\_\_\_\_

(Put  
age as  
whole  
number.  
Example:  
18  
years  
old =  
18)

39) Race (select those with which you identify):  
(Select all that apply)

- American Indian or Alaska Native  
 Asian  
 Black or African-American  
 Native Hawaiian or Other Pacific Islander  
 White  
 More than one race  
 Unknown or not reported

40) Ethnicity (Select  
ONLY one with  
which you MOST  
CLOSELY identify):

- Hispanic or Latino  
 Not Hispanic or Latino  
 Unknown or not reported  
(Select ONE)

41) What is your marital status?

- Single  
 Married  
 Separated  
 Divorced  
 Widowed

42) What is your combined annual household income?

- Less than \$30,000  
 \$30,001 to \$40,000  
 \$40,001 to \$50,000  
 \$50,001 to \$60,000  
 \$60,001 to \$70,000  
 \$70,001 to \$80,000  
 \$80,001 to \$90,000  
 \$90,001 to \$100,000  
 Greater than \$100,000

43) How many children do you have?

\_\_\_\_\_

44) How old is your oldest child?

\_\_\_\_\_

(Age in years)

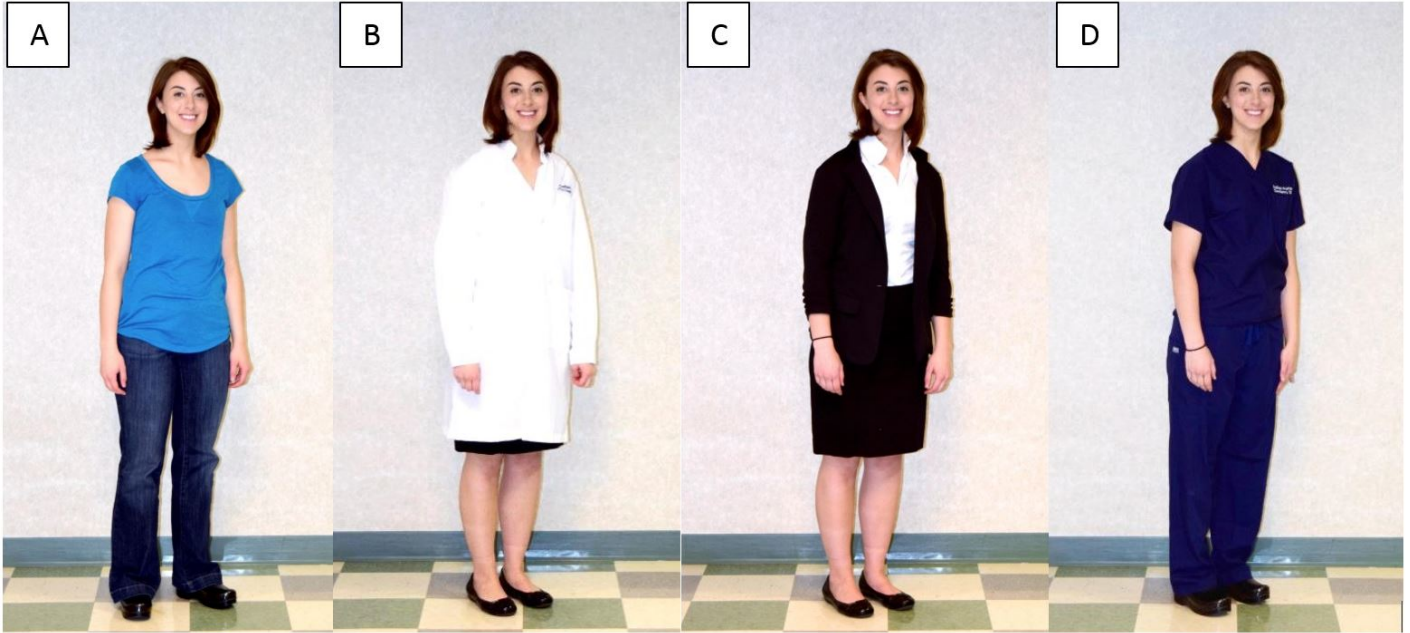
45) Is this your child's first visit to the dentist?

- Yes  
 No

# Pediatric Dental Survey

Please complete the survey below.

Thank you!



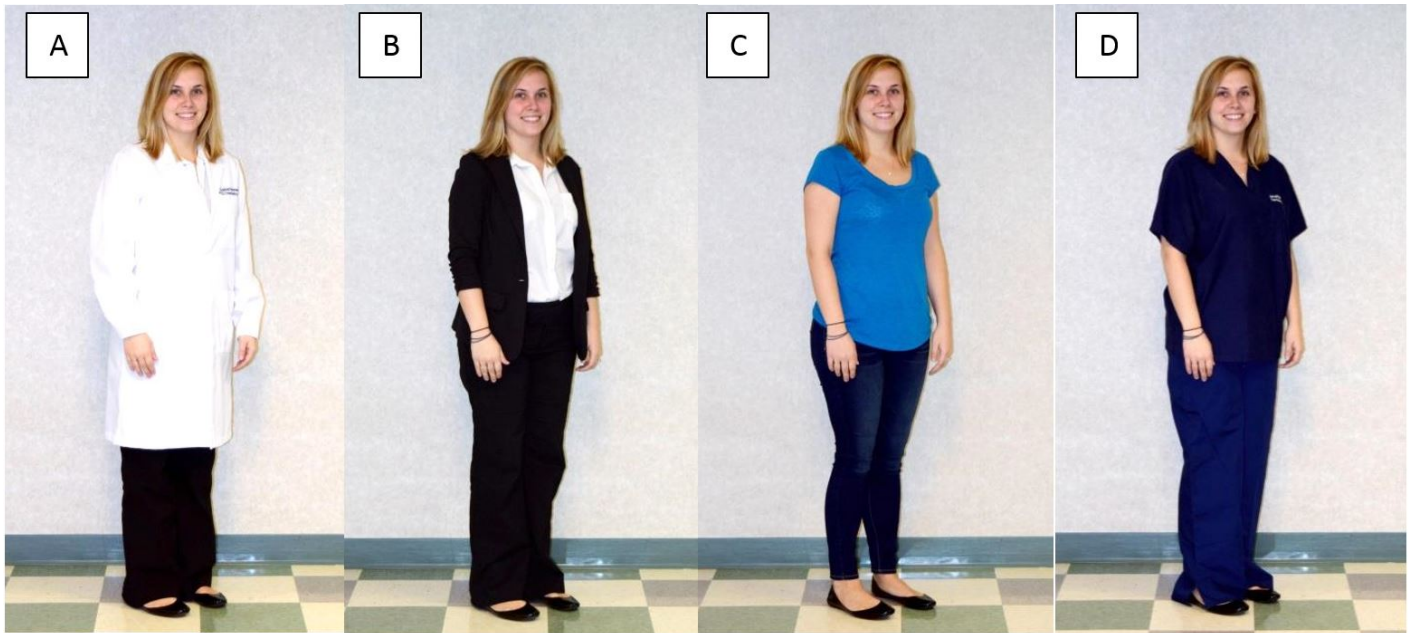
1) Which dentist would you want to be your dentist?

- A    B    C    D    None of the above

2) Which dentist would you NOT want to be your dentist? Check all that apply.  
(Check all that apply)

- A    B    C    D

**Section 2 of 5**



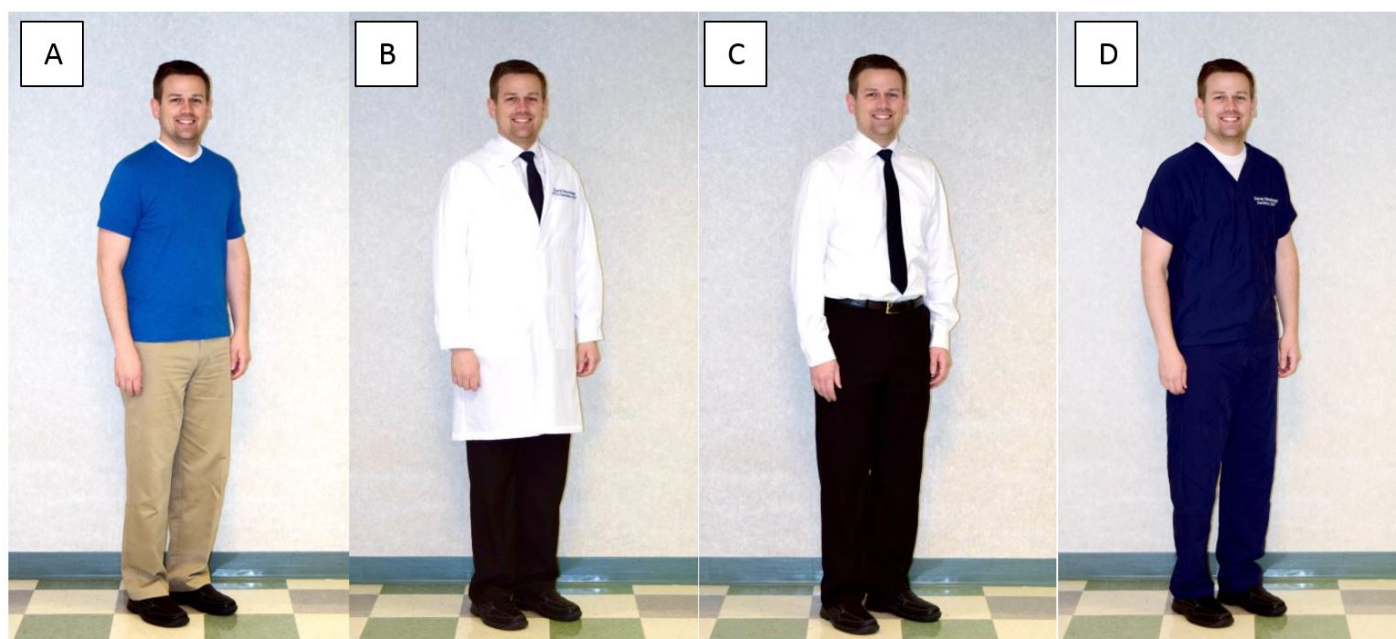
3) Which dentist would you want to be your dentist?

- A    B    C    D    None of the above

4) Which dentist would you NOT want to be your dentist? Check all that apply.  
(Check all that apply)

- A    B    C    D

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**Section 3 of 5**

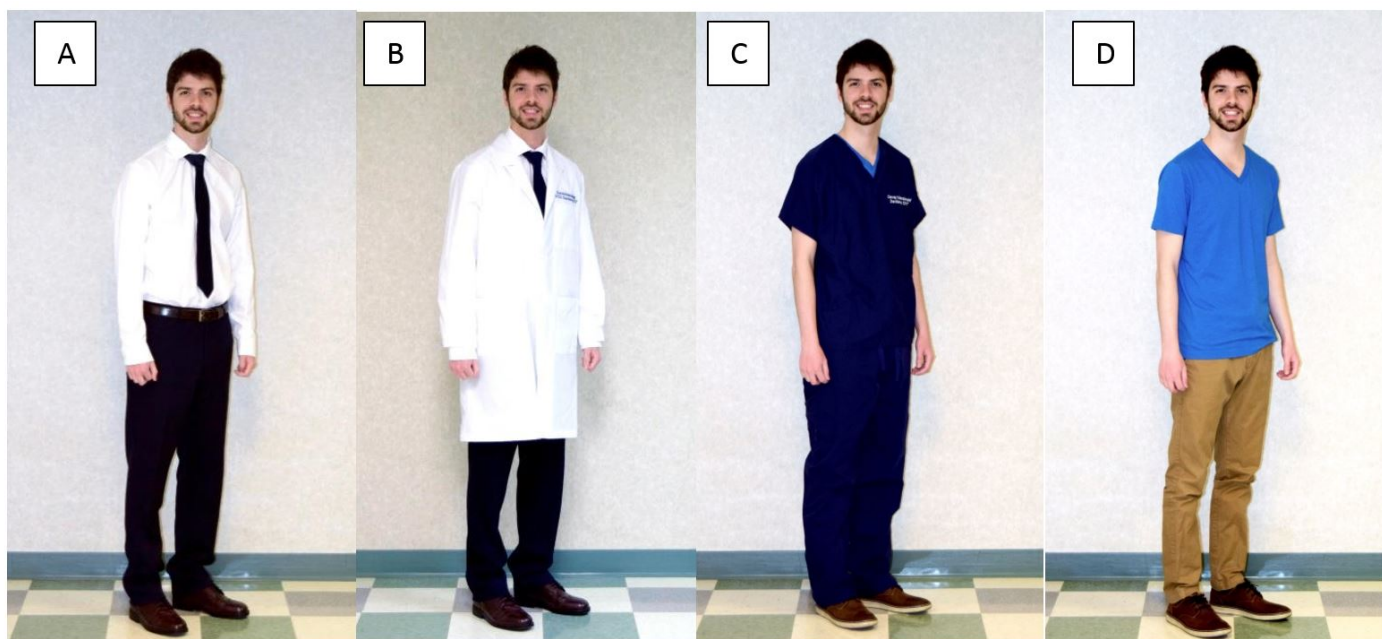
5) Which dentist would you want to be your dentist?

A  B  C  D  None of the above

6) Which dentist would you NOT want to be your dentist? Check all that apply.  
(Check all that apply)

A  B  C  D

---

**Section 4 of 5**

7) Which dentist would you want to be your dentist?

A  B  C  D  None of the above

8) Which dentist would you NOT want to be your dentist? Check all that apply.  
(Check all that apply)

A  B  C  D

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**Demographics****Section 5 of 5**

- 9) Gender  Male  
 Female
- 10) Age \_\_\_\_\_  
(Must be within 4-17)
- 11) Race (select those with which you identify):  
(Select all that apply)
- American Indian or Alaska Native  
 Asian  
 Black or African-American  
 Native Hawaiian or Other Pacific Islander  
 White  
 More than one race  
 Unknown or not reported
- 12) Ethnicity (Select ONLY one with which you MOST CLOSELY identify):
- Hispanic or Latino  
 Not Hispanic or Latino  
 Unknown or not reported  
(Select ONE)
- 13) Is this your first visit to the dentist?
- Yes  
 No

## Vita

Dr. J.D. Westphal was born on February 10, 1983 in Orem, Utah. He received his Bachelor of Science in Biology/Zoology from Southern Utah University in 2008. He completed his Doctor of Dental Surgery degree from the University of Nevada Las Vegas in 2014. Dr. Westphal will complete his Pediatric Dental Residency at Virginia Commonwealth University in June 2017.