

Exploring the Experiences of Dentists During Dental Visits of Patients with ASD

Research Article

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Abstract

Children with Autism Spectrum Disorder may manifest different behaviors during their checkups due to unusual stimuli inside the dental clinic. The dental practitioner and other staff may encounter difficulty anticipating the success of the treatment if both dentist and patient come unprepared. This study intended to explore the undesirable behaviors of patients with ASD and the challenges encountered through the experiences of dentists. The study used a qualitative case study method which was participated in by five (5) dentists through interviews and five (5) patients through observation. First, it was identified that the uncooperativeness of patients with ASD was one of the undesirable behaviors manifested during a checkup. Second, carrying out dental treatment, handling patients with ASD, communicating with patients, and making patients comfortable add to the difficulty of dentists. Third, the ideal treatment plan will not be implemented if behaviors were not properly addressed. And lastly, receiving training on handling patients with ASD, providing positive behavior support during treatment, and proper scheduling played a significant role in managing the behaviors of the said patients. Hence, it is important to identify the profile of each patient before the start of the treatment so the dentist and his team will be prepared with the necessary management needed. Moreover, preparing the patient with Autism Spectrum Disorder prior to the checkup is significant for managing the child's expectations of the situation.

Keywords: Pediatric Dentistry; ASD; Dentists; Dental care; Dental Management.

Introduction

Healthy smiles are essential to children. Maintaining good oral health for children in a particular group of disabilities known as Autism Spectrum Disorder is not easy for some. The unique features of patients with ASD have the possibility to make dental visits demanding in different ways. The behavior manifestations of their characteristics having difficulty tolerating changes and adapting to a new environment can be challenging for dentists and might affect the success of the dental treatment.

Autism Spectrum Disorder is a neuro developmental disorder and they are characterized by qualitative impairments in social interactions, absent or impaired language and communication skills, and present with a wide range of stereotyped, repetitive behaviors [1]. The word Autism is derived from the Greek word "autos," which

means self, and "ismos," which means a state of self-absorbed to the exclusion of everyone around them [2]. Diagnosis of ASD is currently based on two areas: (A) persistent difficulties in social communication and social interaction across multiple areas of daily living, (B) restricted and repetitive behaviors and interests [3]. The cause of ASD is still unknown even if there are numerous research about the said condition, but there are links related to it such as genetics, environmental factors, and medical problems.

Children with Autism have multiple medical and behavioral problems, which make their dental treatment extremely difficult [4]. Based on the study conducted by Stein [5], stereotypical and repetitive actions can also complicate dentists' ability to safely and effectively provide dental care. Children with ASD can be come agitated by over stimulation from many people touching them, and from loud noises and smells in their environment [6]. Children visit their dentist equipped with a learned set of behaviors

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that have successfully helped them to cope with other difficult to anxiety-inducing situations, and they will naturally use these coping strategies in the dental setting [7]. They pose the greatest challenge for dentists, due to their complex and varied clinical manifestations [8]. Another challenge to oral care practitioners is the decreased ability of patients with ASD to communicate and respond to others, particularly to unfamiliar persons. Lack of communication can be a problem if the patient is unable to articulate his fears, pain, or emotions. Certainly, if a child's behavior in the dental surgery/office cannot be managed then it is not easy if not unworkable to hold out any dental care that is needed [9].

The dentist must be in control of the different stimuli that may trigger a range of behaviors in patients with ASD during the check-up. They should also recognize that the dental management of each individual with a disorder is uniquely different from other patients, especially from those who are typically developing. Among children with ASD, sensory sensitivities were associated with oral care difficulties in the home and dental office, and with behavioral difficulties in the dental office [5].

Patients with Autism Spectrum Disorder may have difficulty understanding the people and the things happening around them especially if the situation is unprecedented. The said disorder is challenging for a health care provider to diagnose and treat. Dentists don't need to become experts, but being aware of the common behaviors and challenges that may trigger during dental checkups, and how to adapt to them will be significant in improving the dental care to be received by patients with ASD.

Materials And Methods

This study documented the experiences of dentists with their patients with ASD during dental visits. The researcher identified the different behaviors manifested by patients with ASD and the difficulties that dental practitioners experience when treating the said patients. This study was guided by the following research questions:

1. What are the undesirable behaviors of patients with ASD during a dental checkup?
2. What are the difficulties encountered by dentists to patients with ASD during a dental checkup?
3. How do undesirable behaviors affect the success of dental treatment?
4. How do dentists address these difficulties?

Methodology

This study employed the research design based on Robert K. Yin's Case Study Research Design and Methods. It was used since the researcher has little or no control over behavioral events and was focused on the actual situation of the dentists' experiences. The case study methodology by Yin [10] that this study followed has six interconnected steps; plan, design, prepare, collect, analyze, and share. It was reiterated that the case study research is linear and progressing, at the same time, following an iterative development. The researcher applied in this study the method illustrated in Figure 1 to examine the current experiences of dentists during dental visits of their patients with ASD.

Research Respondents

This study was conducted in five (5) private dental clinics in Metro Manila, Philippines that cater to patients with ASD. The research respondents were composed of five (5) dentists who were recurrently practicing and treating patients with ASD. The researcher chose respondents who have experience in providing and receiving dental care. The results were derived from the answers of the dentists through a one-time interview and direct observations of their patients.

Data Collection and Analysis

The researcher engaged in gathering information by conducting a face-to-face interview with the dentist and doing a one-time observation with patients with ASD in their respective clinics using an observation guide.

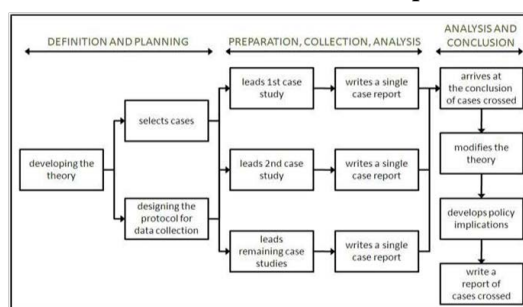
The data obtained were tabulated and analyzed by going through all of the text and labeling words, phrases, and sections of text to search for patterns. The codes were arranged together to form categories and to develop emerging themes per case. Each of the themes created was then matched to the research question is answered. It also included the related literature about the theme, excerpts from the dentist's interview, and the observation notes made by the researcher to support the data gathered based on the interview.

Results and Discussion

Research Question 1: What are the undesirable behaviors of patients with ASD during a dental checkup?

Uncooperativeness in the Dental Clinic: Dental Clinic is an organization that is responsible for providing health medication and treatment for all types of dental patients [11]. One common

Figure 1: Yin's Procedural Framework of Multiple Case Study (2014).



theme that emerged for research question 1 was Uncooperativeness in the dental clinic. It was evident in all cases that being uncooperative was observed and experienced by the interviewed dentists themselves during dental visits of patients with ASD. These were exhibited through non-compliance such as refusal to enter the clinic, refusal to sit on the dental chair, and refusal to follow instructions.

Refusal to enter the clinic. Dentist C expressed during the interview that some of her patients display uncooperativeness in the dental clinic by refusing to enter the clinic. As she said:

“Based on my experience, some of them do not want to come inside our clinic. Their parents would report that on the way herein the clinic, their child will complain in the car... It seems like it's automatic for them to resist when coming in or entering the treatment room.”

Dentist B also reiterated that *“Other kids donot want to enterour clinic or usually they comere crying.”* Most patients come with a set of behaviors that manifest during an unlikely, unknown, or unfamiliar situation such as going to the dentist. Some patients may come prepared but on the day of the checkup, they may feel overwhelmed or frightened by the actual scenario. Fearful pediatric patients often refused to sit in the dental chair or open their mouths for oral examination [12]. Information on the origin of dental fear and uncooperative behavior in a child patient before the treatment procedures may help the pediatric dentist plan appropriate behavior management and treatment strategy [13].

Dentist A cited a similar observation as to what Dentists B and C experienced in their clinics:

“...Sometimes some patients with ASD do not want to enter the clinic just like the patient you observed. His parents are very patient in coming here and talking or explaining to us coz Patient A is nonverbal.”

As observed by the researcher, the parents of Patient A negotiated with their child to enter the clinic by bribing him with the food they bought from the latter's favorite fast food chain. The spaghetti should be the reward of the patient after the treatment but they used it as a bribe for him to come inside the room.

Refusal to sit on the dental chair. Another demonstration of a patient being uncooperative was the refusal to sit on the dental chair. Based on the study of Hernandez and Ikkanda [14], sitting skills are the foundation for developing other skills required for in-office treatments. This is one of the prerequisite skills needed to learn by patients with ASD since dental procedures require patients to sit on the dental chair. Dentists A and B shared that they encountered patients who do not want to sit on the dental chair and does not want to cooperate with them. Dentist D also came across the same situation in her clinic as she recalled:

“Well I experienced patients who donot want to sit on the dental chair, donot want to say “ah”, do not like the tools, the taste of the fluoride..”

As observed by the researcher, he did not want to sit on the dental chair and kept hiding behind the dentist's back. Dentist C gave a reminder to Patient C by saying, *“last 10 counts standing and you need to sit on the chair.”* The patient eventually followed right after the instruction and sat on the dental chair.

Johnson & Rodriguez [6] said in their study that challenging behaviors are a child's way of communicating their frustration when their routine is interrupted. Aside from the refusal to enter the clinic and sit on the dental chair, some patients with ASD exhibit uncooperativeness in the dental clinic by not following the instructions given by the dentist. Dentist A disclosed:

“They may show lack of cooperation, tension, and unwillingness to accept treatment. They don't want to follow us or our instructions when we instruct them to sit down or open their mouth, just like I said earlier there's this one patient whom I'll really not forget, ever. That he intentionally chooses to keep his mouth closed.”

Refusal to follow instructions. Aside from displaying uncooperative behaviors as a reaction due to dental stimuli factors experienced inside the clinic, some patients also intentionally oppose following the instructions of the dentist. Dentist A shared another similar incident:

“One time, a patient pulled the dental suction tube because he doesn't want to cooperate. Another patient took the dental mirror and threw it away. Then they will just laugh after. Very challenging right? Or sometimes they intentionally don't open their mouth.”

Dentist C like wise reported during her interview:

“I also experienced a kid who does not follow any of my instructions like when I say “sitwell” or “please open your mouth”, as in he's really not following.”

According to Johnson & Rodriguez [6], non-compliance extends to emotional outbursts and temper tantrums or behavioral outbursts when children with ASD are asked to comply with instructions related to their health care and hospital care.

Aggressive Behaviors: The unique theme that emerged for research question 1 was Aggressive Behaviors. This theme emerged based on the answers of Dentist A. She stated, *“There was a time that a patient bit my thumb. Then after that, as if nothing happened.”* Challenging behaviors exhibited by children with ASD in the health-care setting, often a result of boredom, anxiety, or fear, may include creaming, crying, tantrums, aggression, apathy, and lack of cooperation with providers [15]. A patient with ASD tends to be aggressive when triggered by stressful or uncertain situations. It can be their means of coping with the demanding environment or it can be their way of communicating that they are in a difficult situation. The cause of such behaviors is unknown, but it may be a source of self-stimulation for these children, and it is more commonly seen in nonverbal children with impaired cognitive functioning and altered sensory processing [16].

Behaviors Associated with the Past: Another unique theme was Behaviors associated with the past. This theme emerged based on the answers of Dentist B. She clarified that some patients exhibit undesirable behaviors because they had a negative experience during their past dental visits. She said, *“Well some are curious, some are excited, some are crying maybe because they have a negative experience in the past.”* Based on the study of Appukkuttan [17], dental anxiety can arise due to multiple factors such as previous negative or traumatic experiences, vicarious learning from anxious family members or peers, individual personality characteristics such as neuroticism and self-consciousness, lack of understanding, exposure to fright-

ening portrayals of dentists in the media, the coping style of the person, perception of body image, and the vulnerable position of lying back in a dental chair.

Research Question 2: What are the difficulties encountered by dentists to patients with ASD during a dental checkup?

Carrying Out Dental Procedure: There was no common theme that emerged from all the dentists for research question 2. None the less, the theme Carrying Out Dental Procedure was evident in 4 dentists that includes Dentists A, B, C, and E.

Dentists may encounter difficulty in pushing through with the services they need to provide their patients because they are associated with causing pain and discomfort to them. Dentist E somehow expects difficulties in carrying out dental treatment. As she quoted,

“..Opening their mouth then someone will put tools inside is also not part of their everyday life that is why we understand when they react differently during the treatment.”

The feeling of uneasiness comes in when dentists put tools inside a patient's mouth. As stated by Dentist B,

“But most of them do not want tools inside their mouth. Maybe because they are not used to it. Sometimes they complain because they can't tolerate the tools in their mouths. Or they are already tired of opening their mouth or they cannot sustain opening their mouth for the whole time.”

Dentist A also shared the same thoughts during her interview. She said:

“Some patients can't tolerate the procedure and they don't like the tools inside their mouth... It is difficult on our part because we can't force them to open their mouth.”

During dental treatment, dentists may require not only one but sometimes two or more tools to be put inside the patient's mouth. Aside from these, they are also required to sustain their mouth open for the duration of the procedure. Dentist B added, *“It is also difficult to let them open their mouth then sustain for the whole time so we need to be quick in treating them.”* Thus, it will be difficult for dentists to proceed with the treatment if their patients cannot perform both of these skills. Furthermore, a child's dental practitioner and their team cannot force the child to open their mouth and needs to wait for the patient to be ready. Certainly, if a child's behavior in the dental surgery/office cannot be managed then it is not easy if not unworkable to holdout any dental care that is needed [9]. As observed with Patient B, she was able to tolerate the tools inside her mouth with proper guidance from the dentist.

Dental instruments such as mouth mirrors, explorers, excavators, cotton pliers, and saliva ejectors are common tools that patients will encounter during dental treatment. As per Dentist C, even typically developing children have a difficult time opening their mouths and sustaining them open since they are easily tired. As she explained:

“Some of them have difficulty opening their mouth. They easily feel tired of opening their mouths. Those difficulties are understandable. Some kids even those without special needs, have a

hard time tolerating the tools in their mouths. May be a factor to consider is that their mouth is small and of course they are kids. There are things that we cannot push them to do especially if they don't understand yet the importance of oral health care.”

It was seen in Patient A that he had difficulty sustaining his mouth open. Understandably, children cannot tolerate more than one tool because their mouth is small and some have mouth and motor limitations.

Getting Patient Settled: The unique theme that emerged was Getting Patient Settled. This theme emerged from the answers of Dentist D. It was observed that Dentist D had difficulty getting Patient D settled because of the movements he exhibited during the treatment. Movements such as crying, kicking, and removing the hands of the assistant dentist were noted during the treatment. As she disclosed during the interview:

“They exhibit repetitive movements or those stimulatory behaviors, some repeat what they just heard from the TV or echo, and they will not forget it. Some have usual routines that cannot be interrupted. Difficulty tolerating changes in their usual routine or schedule.”

It is possible that these behaviors were manifested due to the change in the usual schedule of the patient. Based on the study conducted by Stein [5], stereotypical and repetitive actions can also complicate dentists' ability to safely and effectively provide dental care.

Based on observation, Patient C kept on whining and crying during the initial part of the treatment. The intensity of his behavior was minimized when the doctor provided continuous verbal praise and continued talking with the patient. The dentist was explaining what she was doing and tries to redirect the attention of the child by constantly reminding him that he was doing great. Towards the end of the treatment, the patient was relaxed and did not exhibit any behaviors anymore and the medicine took effect already.

Research Question 3: How do undesirable behaviors affect the success of dental treatment?

Ideal Treatment Plan Not Executed: The common theme that emerged in research question 3 was Ideal Treatment Plan Not Executed. The dentist's failure to do the required treatment may compromise the service that the patient needs to receive especially if it is urgently needed. All the dentist participants identified that undesirable behaviors of patients with ASD hinder the positive outcome of dental treatment. Furthermore, it can also cause disorders in the clinic and other patients may be affected as well. According to Dentist B:

“If the child has a difficult behavior, there's a possibility that it will hinder the procedure. It may require more adjustments from the end of the dentist and staff and it may cause disorder in the clinic.”

Dentist A also pointed out: *“Sometimes it impedes the success of the treatment. Because instead of having a continuous treatment, we need to pause to manage behavior or we wait for the child to calm down.”*

Individuals with ASD often have problematic behavior patterns that create challenges for dentists when delivering routine oral-

healthcare [14]. Therefore, effective treatment cannot be performed. It was also quite similar to the response of Dentist D, as she shared:

“Of course, one patient is different from the other but they have a characteristic which may be reactive and might hinder the success of dental treatment. Usually, these characteristics might reflect in their behaviors. Effective treatment cannot be performed.”

Dentists might not be able to continue with the treatment plan intended for the patient if behaviors continue to arise during the checkup. Pushing through with the dental treatment even if the patient with ASD is already exhibiting a tantrum might also create a negative memory for the child and may result in a bad experience that can affect future dental visits. Dentist C imparted:

“If a patient exhibits tantrum, there is a tendency that we’ll have difficulty making progress with the treatment. There will be delays in providing the care that the patient needs. I feel bad for the patient. We won’t be able to provide the service that the child needs if there is a difficult behavior because it really impedes the procedure.”

When behaviors arise in the dental clinic, there is a possibility that the dentist might not be able to progress to the treatment plan. The treatment will be compromised since the dentist needs to manage the behavior first. There is a risk of having a negative experience if the dentist continues with the procedure while the patient is not yet ready. Dentist E also revealed:

“Somehow it affects successful dental visits by not being able to carry out any dental care that is needed. Behavior management is really a key factor in providing dental care for these particular patients.”

The dentist might need to take some extra effort to progress with the treatment if the procedures are always impeded or delayed due to the unexpected behaviors of the patient with ASD. No single assessment method or tool is completely accurate in predicting a patient’s behavior, but awareness of the multiple influences on a child’s response to care can aid in treatment planning [18].

Oral Health May Be At Risk: The unique theme in research question 3 was Oral Health may be at risk. This theme emerged from the answers of Dentist A. There will be delays in providing immediate care for the patients if behaviors arise during the checkup. Hence, the oral health of the patient might be compromised. As Dentist A reiterated:

“Some times if treatment is rescheduled, there’s a tendency that the patient will not come back anymore. So, oral health may be at risk. Especially for kids who need urgent care. Usually, kids with special needs, or even kids without disabilities, come here if there’s a teeth problem or if the condition is already worst. So, delays really can cause risks to children.”

Although there appear to be no known autistic-specific oral manifestations, oral problems might arise because of autism-related behaviors such as communication limitations, personal neglect, effects of medications, self-injurious behaviors, dietary habits, resistance to receiving dental care, hyposensitivity to pain, and possible avoidance of social contact [19]. Considering the delays that will happen when an ideal treatment plan is not executed and given right away, there is a possibility that the oral health of the patient might be exposed to possible or further damage. Thus,

children with Autism Spectrum Disorder are at high risk for oral disease [5].

Research Question 4: How do dentists address these difficulties?

The themes under research question 4 were the strategies that were seen as effective by the interviewed dentists in their current practice. The three common themes that emerged in this research question were Positive Behavior Support, Scheduling, and Professional Training and Experiences.

Positive Behavior Support: The first common theme was Positive Behavior Support. The establishment of a good relationship between the dentist and the child has been shown to increase the success of treatment in terms of the child’s cooperation during the treatment or advice for prevention [20]. In special education, positive behavior support is a general term that refers to the application of positive behavioral interventions and systems to achieve socially important behavior change [21].

Positive Approach. All dentists that were observed by the researcher used a calm and gentle tone of voice during the treatment of their patients. Being able to do so, they were able to set a warm and encouraging atmosphere inside their clinic. As Dentist B cited, *“I also play with them using some of our tools like the tooth brush, sing songs.”* Dentist A also expressed that she loves kids and that using a gentle tone of words minimizes their stress:

“May be because I love kids. Very helpful if the patient sees you regulated, you co-regulate, using soft and gentle words, it will relax them. It is also important to play without patients’ eyes, because it decreases their stress and anxiety.”

Dentist C likewise mentioned, *“Talking to them and having a calming voice also makes them feel safe, comfortable, and relaxed.”* The dentist’s attitude, body language, and communication skills are critical to creating a positive dental visit for the child and gaining trust from the child and parent [18]. It is significant to establish rapport to gain the trust and confidence of the patient with his dental care provider. Hence, creating a dentist-and-patient healthy relationship ensures safety during the treatment. Dentist A added to her statement:

“We need to establish rapport with the patient before doing the procedure. We engage in small talks or we play with them. As a dentist, we need to make the patient feel at ease or comfortable with us.”

Children who have positive interactions with their dentist will be more likely to visit the dentist and will have better dental health [20]. Dentist E said, *“That is why we always strive to make every dental visit a fun experience for them so they’ll associate us with something happy and fun.”* She also allowed the child to choose the color of the toothbrush and the flavor of the toothpaste that they used (choices are banana, strawberry, and milk).

Positive Reinforcement. Positive reinforcement is an effective technique to reward desired behaviors and thus strengthens the recurrence of those behaviors [17]. It was common to all the observed dentists that they used social reinforcers and verbal praises such as “Good Job” or “Very good”. In addition to that, they also used other reinforcers that were appropriate to the profile of their

patients. As per Dentist D, she provides “..praises, rewards, and our approach with them were just gentle.” Dentist C as well reiterated:

“At the end of the treatment, we give stickers to the child as their token or reward for doing well. Or sometimes it’s the parents who give their child a reward such as toys, go to the toy store or sometimes Jolli bee.”

If we reinforce a patient for keeping the mouth open then that patient is more likely to open the mouth again, and therefore less likely to refuse to open the mouth [7]. Dentist A shared during the interview the importance of providing verbal praises:

“Continuous praises are also given ‘verygood’ or ‘good job opening mouth’. They respond positively when they are given continuous praise. Maybe it boosts their confidence as well. Then after the procedure, they’ll choose their reward. We have a canister with different items like ball, bubbles, stickers then the child will pick one as his reward. And they’re happy. For other kids, the thought of standing and leaving the room is already the reward for them.”

Aside from reinforcing the patient, it was also observed that parents too prepare a reward for their child after the treatment. The parents of Patient B gave her favorite stuffed toy after she finished her treatment. As observed, Dentists B and E provided continuous verbal praises to their patient for the duration of that treatment.

Tell-Show-Do. Dentist B mentioned another way to provide support to her patients, “I usually present the tools that we will be using. Mostly, they enjoy the different colors of the brush that I use during the treatment.” In Tell-Show-Do procedures, the provider describes and models the procedure before treatment [14].

Scheduling: The next common theme was Scheduling. Scheduling contributes a significant role in providing a positive dental experience for patients with ASD. Predictable schedules and forms of behavior therapy are effective strategies for preventing challenging behaviors [6]. The dental practice must ensure that the schedule is organized to accommodate the goals and procedures needed for each patient. Dentist E brought up:

“We are more considerate with regards to their appointment and time. We schedule them first thing in the morning or the afternoon so there are few people in the clinic. Usually, we can identify the profile of the child. So, if they confirmed their slots, we allot 1 hour for them for the treatment. Just in case there will be a next patient, they will not wait that long.”

Early Morning Schedule. According to the study of Dougall and Fiske [22], minimizing waiting times, by giving the first or last appointment of the day, reduces stress. Dentist B specified that they are lenient in providing a schedule to their clients. She usually schedules patients that require more familiarization and adjustments in an early morning schedule so that there will be minimal distractions from other patients. It is also the time of the day where in their clinic has lesser patients. Waiting can increase anxiety, which can lead to feelings of anger and unwillingness to cooperate [23]. As she mentioned, “We usually schedule them early in the morning so there are few people in the area and they won’t be distracted with other people or patients.” Dentist B also shared that few clients opt to have their treatment done in the morning especially on a weekend, just like the parents of Patient B who scheduled their daughter as early as 8:00 am.

It was also seen during the observation of the researcher with Dentist D, Patient D arrived around 7:30 am in the dental clinic together with his parents. The patient was scheduled to be administered an oral sedative drug which is why they came 30 minutes earlier than the expected schedule of the clinic. Dentist D pointed out:

“We also schedule the patient earlier time just like with Patient D so that there are no other patients since we need to wait for the medicine to take effect. Usually around 15-20 minutes.”

Longer Treatment Time. Some patients were also given the early morning schedule so that the dentist can provide a longer treatment time with them. Getting the early morning slot allows Dentist B to maximize her time just in case a patient throws a fit or any unexpected behavior. She sees to it that there is no next patient in the queue. As she quoted, “I wait for them to relax so that our dental treatment will be successful and she’ll recall a positive experience here with us in the clinic.” She also added, “Plus, we can take our time during the treatment just in case unexpected behaviors arise.” On the other hand, Dentist D reiterated:

“Scheduling them super early in the morning or late in the afternoon will also give longer treatment time for the patient. We don’t need to get hurry if there is a next patient waiting.”

Dentist A almost said the same statement as Dentist D:

“We schedule them at their convenient time and we make sure that there is no next patient in the cue. So we can take our time in treating them and no next patient will be affected if we extend our time.”

For patients with special needs, it is important to accommodate them at a certain time of the day with no next patient in the cue or on a longer treatment time so the dentist can concentrate well and take her time with the procedure. It will also be helpful if the said patients will be scheduled at a time of the day where in there are fewer patients just like what Dentist B shared so that the patient will not be distracted by the people in the clinic and avoid unnecessary behaviors that may arise due to waiting time. Because of the limited attention span of ASD patients, short, well-organized appointments should be planned and the waiting time should not exceed 10-15 minutes to avoid upsets [8].

Pause Treatment. It is significant for patients with ASD to be ready until they become comfortable and at ease with an unfamiliar place. With that, they will be able to remember that the dental environment is not as stressful as they think. Dentist B said, “If kids are crying, I don’t normally continue with the treatment or push them to comply.” They usually pause the treatment so it will not be stressful for the patient and the parents and the dental practitioners as well.

Reschedule Treatment. If there are cases where in the child throws a fit and the dentist decides to discontinue the treatment, the patient will be scheduled for another appointment. Dentist B discussed,

“With that, we reschedule on another day so it won’t be difficult for the child and they won’t associate us with something negative here in the clinic. Better if they leave our clinic happy right?”

She also mentioned, *“And just like what I have said earlier, we are lenient, if the child starts to throw a fit, then, we can reschedule him on a different day or time.”* Whenever they encounter a patient that is not ready for treatment and does not respond to the strategies that are presented, the staff reschedules them on a different day based on the availability of the dentist.

According to Dentist C, *“So if that’s the case, we just reschedule them and they don’t need to pay.”* It will be stressful for the patient and dentist as well to resume the treatment if the behavior is not addressed properly. Dentist C also added:

“Like what I mentioned earlier, we are lenient with regards to accommodation and scheduling... That is why when we have special needs patients, we schedule them super early in the morning or last patient in the afternoon or any time or day with less patients.”

For Dentist C, scheduling a patient with special needs during off-peak hours maximizes their time for the treatment and allows them to provide all the necessary dental care needed by the patient. As Chandrashekhara and Bommangoudar [2] cited in their study, the dental team should be organized for changeable and a typical responses to sensory stimuli, as these patients dislike even minute changes in their surroundings and require an environment in continuity.

Professional Training and Experiences

Another common theme was Professional Training and Experiences. The dentists interviewed by the researcher mostly knew about treating patients with special needs. General dental practitioners should be aware of the criterion for the diagnosis of ASD and the depth and complexity of the disorder [3]. They were able to get familiarized with it from lectures during their undergraduate course. As Dentist B quoted, *“Usually it comes with pediatric dentistry, the healthcare for special needs.”* The same goes for Dentist C:

“We didn’t get a chance to have hands-on training in treating patients with ASD in particular. It was just a topic in one of our subjects in college. Through the years of experience, I just learned managing behaviors from different professionals and of course from the parents.”

As per Dentist A, *“I usually attend training for self-improvement and ask professionals or parents on how to handle behavior.”* Moreover, she added:

“We had pediatric dentistry subjects and cases before. But practically speaking it was mostly concentrated on treating pediatric patients. We were taught through lectures on how to treat patients with special needs, but of course, lectures are not enough. Experience is the best teacher. I really learned a lot from my experiences. My patients are actually training me. I am also learning a lot from parents when they tell their stories.”

Dentist D also shared that she has a 5-year-old niece who has a speech and language disorder which is why treating children with special needs is somehow familiar to her. According to Roberts et al. [7], it is important that the knowledge and practice of behavior management should be incorporated into a continuous learning process or education for all pediatric dentists. Among the interviewed dentist, only Dentist E had a continuing education abroad after her undergraduate degree where in she was taught and trained to handle patients with special needs, particularly those with ASD. Their clinic here in Manila concentrates on pediatric

and special needs patients and offers a variety of services at a very affordable cost. She also added that her team trains other dentists to be knowledgeable and equipped in treating patients with special needs.

Aside from the dentist herself being trained, it is also important that the employees in the clinic are knowledgeable in dealing with patients with special needs. Dentist C’s dental staff and colleagues are receptive to training, accommodating, and treating the said patients. As she cited, *“Our staff and other dentists here in the clinic are also willing to learn more about them, especially those with Autism.”* Based on the study of Robertsetal. [7], the dental team as a whole, including all auxiliary personnel, should be trained in the knowledge and practice of the various techniques, so that all children may be cared for to the highest possible standards.

Protective Stabilization: The unique theme in research question 4 was Protective Stabilization. This theme emerged from the answers of Dentist D. The broad definition of protective stabilization is the restriction of a patient’s freedom of movement, with or without the patient’s permission, to decrease the risk of injury while allowing safe completion of treatment [18].

According to Dentist D, *“For patients who have the tendency to remove our hands from their mouth, we use a papoose board so their hands are on the side only.”* Before the procedure, it was also observed by the researcher that the dental staff used a papoose board to wrap around Patient D to limit the patient’s body movements and to make him steady during the dental process. The board helped stabilize Patient D’s body and minimize unnecessary movements since he started crying, kicking, and removing the hand of the dentist.

Self-Regulation: Another unique theme was Self-Regulation. This theme emerged from the answers of Dentist A. Dentists especially those who handle pediatric cases and patients with special needs are prone to experience undesirable behaviors such as whining, shouting, crying, and a variety of other inappropriate behaviors. These manifestations of behaviors of the said patients may cause stress to the dentist and might affect how they think, act, and manage their emotions during dental treatment. Self-Regulation is a dentist’s way of coping with the said difficulties encountered in the dental clinic. Farokh-Gisour & Hatamv and [24] discussed that these conditions cause dentists to be irritable or make them nervous since they have to spend energy to stop them and adapt to such behaviors. Thus, dentists need to be careful with their thoughts and actions to manage their unexpected impulses or reactions to how they feel toward their patients. As expressed by Dentist A:

“Of course, my inner self is kind of impatient and wants to get angry but I can’t, right? Even if I love kids, of course, we also get exhausted at times. Especially if it’s successive... Of course, I just smiled. Pretending that everything is okay.”

Dentist A also pointed out, *“So sometimes, I also feel tensed because I am not doing anything to the child.”* They should practice self-control and enhance their ability to stay regulated to manage stressful situations when their patient starts to exhibit a tantrum. As observed with Dentist A, she was able to keep herself relaxed and regulated even if Patient A exhibited undesirable behaviors such as refusal to follow instructions and react with stimulatory behavior. Antici-

pating the occurrence of unexpected behaviors of patients with ASD also helps increase a positive dental experience for the patient and dentist as well.

Parental Intervention: The last unique theme in research question 4 was Protective Stabilization. This theme emerged from the answers of Dentist E.

As reported by Dentist E, Patient E was able to tolerate the procedure and control his behavior after several appointments at the dental clinic. During his initial visits, the presence of his mom is needed for the child to cooperate. The support of the parents also played a significant role since Patient E's mom consistently brings him to dental checkups. Dentist E cited:

“Actually, it is the parents who manage their child during the treatment. Usually, when they cry, parents help us out to identify what works best for their child.”

The parent's presence is used to get the patient's attention and increase compliance, decrease negative behaviors, establish appropriate roles during treatment, provide effective communication between the dental provider and patient, and provide a positive dental experience [2].

Emerging Framework of the Experiences of Dentists During Dental Visits of Patients with ASD

Based on the results, Figure 2 illustrates the experiences of dentists during dental visits of their patients with ASD. The manifestation of the characteristics and behaviors of the said patients varies from one person to another. Even if these patients do not show undesirable behaviors during treatment, it has the potential to make dental visits challenging for the dental team in a variety of ways.

Patients with ASD can exhibit undesirable behaviors such as uncooperativeness when receiving oral care. Most of the patient's uncooperative behavior shows a refusal to follow instructions, enter the clinic, and sit on the dental chair. Inappropriate behaviors come in when they display inappropriate verbalizations and reactions during the visit. Throughout the dental checkup, they might exhibit various reactions such as crying, whining, or even throwing at antrum whenever they feel afraid, anxious, or uncomfortable. It can be their coping strategy with a demanding environment or it can be their means of communication saying that they are in a difficult situation. Aggressive behaviors may come in when

unknown or uncertain situations trigger the patient. It was also revealed that some behaviors were exhibited because the patient associated them with a negative dental experience in the past.

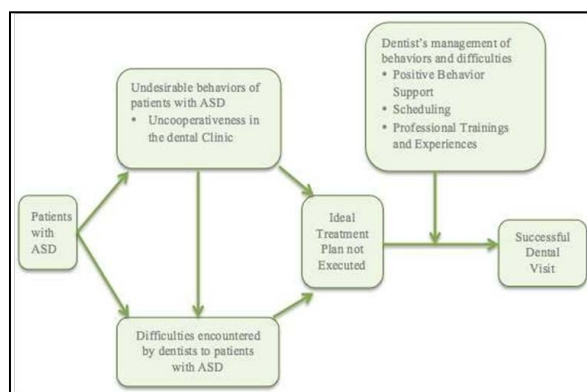
The undesirable behaviors directly lead to various difficulties that dentists may encounter in treating patients with ASD. Communicating with patients can be challenging for dentists due to the said patients' reduced ability in expressing their wants and needs. In some cases, dentists may have a hard time handling a patient with ASD since the latter were not settled and comfortable in the clinic. Dentists might not carry out the dental procedure needed if undesirable behavior persists. When behaviors are still difficult to manage, the stress it brings to the dental team might also affect the decision-making of the dental care provider.

There is also an arrow that directly points from patients with ASD to difficulties encountered by dentists. Even if patients with ASD do not exhibit undesirable behaviors, there can still be possible situations where in dentists may encounter difficulty treating them.

The undesirable behaviors of patients with ASD and the difficulties of the dentists greatly affect the success of the dental visit. The primary effect of this leads to an ideal treatment plan not being executed. All of the said behaviors manifested in the dental clinic have an effect on the dental team and the treatment plan intended for the patient. Other effects include being time-consuming when not treated during the actual visit and the oral health of the patient will be at risk.

For a treatment to be successful, dentists should use management techniques every time they treat the said patients. Aside from equipping themselves with training, their years of experience in their field added an important role in strengthening their skills in handling patients with ASD. Nonetheless, the use of positive behavior support and proper scheduling, whenever they treat patients with ASD played a significant role. Dentists can also accommodate their patients at their most convenient time and schedule them during non-peak hours. Familiarizing the patient with the dental environment before their scheduled appointment, and using distraction techniques during the treatment helped the patients have a positive dental visit. In addition, sedation and protective stabilization techniques were also applicable for patient management as long as properly administered and with parental consent. With all these, proper preparation for the patient and the dental team, and appropriate use of dental management techniques can achieve a positive dental experience for patients with ASD.

Figure 2: The Experiences of Dentists During Dental Visits of Patients with ASD.



Conclusion

Based on the results of the study, the undesirable behaviors of patients with ASD were manifested through uncooperativeness in the dental clinic, inappropriate behaviors, aggressive behaviors, unexpected behaviors, and behaviors associated with the past. The difficulties encountered by the dentists were carrying out the dental procedures, communicating with patients, handling patients with ASD, making a patient comfortable, getting the patient settled, and self-regulation. The ideal treatment plan intended for the said patients will be affected and the oral health of the patient maybe at risk if left untreated because of manifested undesirable behaviors. It will also be time-consuming for both parents and the dental team to reschedule another visit. Even if there were behaviors exhibited and challenges experienced by the dentists, the latter strives to provide a positive and successful dental visit. The observed dentists were equipped with training on how to treat patients with ASD. Their experiences in handling different patient profiles also made them knowledgeable about various techniques in managing several behaviors. Aside from professional qualifications, applying positive behavior support, providing accommodation, giving proper scheduling, allowing patients to get familiarized with the environment, and using sedation were some of the helpful strategies that were seen effective in treating patients with ASD.

It is recommended that dentists motivate parents to pursue regular dental consultations and to give positive information to their children about dental checkups before the actual visit. Incorporate strategies such as positive behavior support by using a gentle tone of voice, positive approach, and reinforcements.

For dental clinics, aside from having a small waiting area where patients can play while waiting, having a television with the child's favorite cartoon placed inside the treatment room may be helpful to distract his attention while the dentist is doing the procedure. It is also beneficial for patients with ASD to have a prior visit before their actual dental checkup to get familiarized with the dental environment. Moreover, it will be helpful if the said patients will be scheduled during non-peak hours of the clinic so that the dentist can maximize the time for the treatment.

During the checkup, it is necessary to provide information such as the possible manifestation of behaviors, effective strategies for management, and reinforcers to the dentist so that the dental team can also have their preparation. It will be helpful if parents can assist their children throughout the treatment. Parental presence may be significant to some patients to decrease their anxiety and increase compliance.

For the special education teachers and schools, it will be helpful to include oral care and hygiene lessons in classroom discussions and incorporate the minactual classroom schedules like brushing teeth after recess or lunch. Students can also have regular visits to their school clinic to get familiarized with the school dentist and dental setting. Special education teachers can provide dental mockups and environment adaptation during their sped sessions so the students can be accustomed to the routine inside the dental

clinic and the tools that dentists use for their patients.

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