Original Articles/นิพนธ์ต้นฉบับ

The Role of Visual Pedagogies in Enhancing Coorporation to Professional Prophylaxis Fluoride of Children with Mild Autism at Yuwaprasart Waithayopathum Hospital

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Abstract

This study was aimed to evaluate the role of visual pedagogies on enhancing cooperation in simple dental procedures as professional prophylaxis fluoride (PPF) of children with autism. Twenty children with mild autism, aged range 6-10 years old; in the 4th ward of Yuwaprasart Waithayopathum Hospital who never had dental treatment were oral examined. Tell-Show-Do (TSD) technique was used to manage their behavior. The children were randomly divided into 2 groups: visual pedagogy (VP) and control (C) group. The PPF procedures will be performed in next 7 days appointment for the C group and only TSD technique were used. For the VP group, 2 days before the next appointment, each child will be prepared for PPF procedure by VP training, which composed of equipments and steps in PPF procedures for once a day and the training time use was recorded. PPF procedures was scheduled in the next day, that the dentist used TSD technique and the same VP album to communicate with the VP group. Every visit each child's behavior was recorded in the VDO tape. The tape was replayed to two independent observers for rating the child cooperation according to Melamed's Behavior Profile Rating Scale. The VP group had increased positive behavior 90% while the C group had 10%. The VP group was significantly more positive behavior than the C group (P>0.05). The VP decreased timing in the second visit for training VP from the first time

KEY WORDS: DENTAL / AUTISM / VISUAL PEDAGOGIES / DENTAL BEHAVIOR

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Introduction

In this decade, the number of autistic patients has found increasing worldwide[1] and that leads to increasing in number of children with autistic in dental clinics as well. Hence, it is impossible to claim that dentists do not have these patients in their patient population, especially, pediatric dentists who are acting as the major role in dental care, which also have to accept referral from general dentists or another dental specialists. Certainly, this will be the primary reason why pediatric dentists have to have several techniques to manage dental behaviors of any children such as Tell-Show-Do, behavior shaping, distraction and modeling[2]. However, these techniques were claimed to be effective only when applied to general children, which might be insufficient for patients with autistic.

Even with limitation of the data regarding dental caries status of autistic children, the reports of autistic children's oral health in developed country such as the United States, suggested that prevalence of dental disease in autistic children is unlikely to be different from those without autism. Lowe and Lindermann (1985) compared the caries index in both primary and permanent dentition of patients 3 to 30 years old who had attended the UCLA Pediatric Dental Clinic in Los Angeles in an age-matched control study; the results showed no difference in caries index between two groups[3]. The study in autistic institutes yielded differently. In Israel, Shafira et.al. in 1989 found that institutionalized young adults with autism had more severe periodontal problems but lower rates of caries comparing to healthy institutionalized young adult with schizophrenia. As same as the young adult group, the noninstitutionalized autistic children also had higher periodontal problems than healthy person but a similar caries rate[4]. They discussed that this was due to the institutionalized autistic group was under help and care by medical team. Another study by Loo C Y. found that patients with ASD were more likely to be caries-free and had lower DMFT than were unaffected patients and there was no significant difference in the caries prevalence and caries severity[5] between institutionalized and non-institutionalized groups.

The lack of cooperation may be attributed to patients' hypo- or hyper- sensitivity to sensory stimuli such as pain, taste, pressures, touch, textures, loud noises or bright light[6,7]. Moreover, the most devastating to caregivers are self-injurious behavior (SIB)[17]. E.G. Duerden et al in 2012 found that half (52.6%) of the autistic children aged 2-19 years demonstrated SIB. The strongest risk factor associated SIB are abnormal sensory processing followed by sameness, impaired cognitive ability and social functioning[8]. Autoextraction, lip and tongue biting were reported as a type of SIB in these patients[9], resulting in dental treatment needs.

Aggressive behaviors, poor cognitive skills, and other associated psychiatric symptoms are also hinder the provision of dental care[6]. A survey of parents of children with autism in their initial dental visit showed that 77% of children with autism were frightened and uncooperative[7,8] and more current studies showed 50-65% of autistic patient were uncooperative during dental treatment, significantly different in the distribution of behavior between the ASD and unaffected groups[5,9-11]. More patients in the ASD group (37.2%) required dental treatment under general anesthesia[5] when compared to unaffected group (29.8%).

Many early intervention treatment techniques are likely to be beneficial in these patients[12] such as "More than words" may improve communication and participate child's talk to their parents[13]. "Picture exchange communication system (PECS)" is more effective at increasing the frequent of speech[14].

"Treatment and education of autistic and communication related handicapped children (TEACCH)" may improve imitation, fine and gross motor skills and non-verbal conceptual skills in these patients[15]. PECS and TEACCH are two visual systems of visual strategies that use pictures, icons, photographs or gestures to enhance the understanding of spoken word and improve communication[16].

In general practice, classic and simple technique to introduce dental treatment to the child is a verbal communication technique called "Tell-Show-Do". The technique allows the child to familiarize with the instrument or procedure in a non-invasive way prior to the actual performing of the treatment. "Tell" is to describe what will happen in the words and terms to which they can relate, after that step "Show" is performed by demonstrate the procedure slowly and clearly but non aggressive to the child, then followed by last step "Do" where the procedure is actually carried out[17]. This technique is the most secondary efficacious and acceptable in basic behavior guidance for dental patients with autism subordinate to positive verbal reinforcement[18]. "Tell-Show-Do" will be more effective in autistic patients when used in appropriate time and with equipment that can facilitate patient-dentist communication. In a study by Bäckman and Pilebro[19], they applied a comprehensive educational concept called TEACCH model (Treatment and Education of Autistic and Communication related handicapped Children), which was developed at the University of North Carolina since 1972, to autistic children. Based on the knowledge that autistic children communicate better via pictures than words, they created a picture book for introduction of dentistry called visual pedagogy (VP) and found it useful. Their later study introduced VP as a media for oral hygiene instruction and succeeded to improve patients' oral hygiene [20]. In 2009, Nitta Y. et al. used the same visual method as of Bäckman and Pilebro guided autistic patients to induction of anesthesia. They found it effective to manage the autistic patients[21].

Taken the specific characteristic of autistic children, difficulty in behavior management for proper dental care and expense and risk in dental treatment under general anesthesia all together, a new proper technique to enhance the autistic child cooperation in dental treatment is necessary for pediatric dentistry. Therefore, the purpose of this study is to evaluate the effectiveness of visual pedagogies to enhancing cooperation introductory to simple dental treatment of autistic children.

Materials and Methods

Subjects recruitment

The autistic patients of ward 4th were divided into 2 groups according to severity, mild to moderate and severe autism. Each group received different programs emphasizing social skills and school preparation. In early intervention stage, visual media was usually applied to enhance communication with patients with autism. Example of those activities in this stage were training to put his/her shoes on, interaction with peers, and learning about his/her body. The patients had been trained on every Monday and Tuesday for 3 months.

Parents of those patients were invited to participate in the study. Study procedures, possible risks and benefits in the study were informed to the parents, the patients' parents had been asked to sign consents before the study procedures were arranged. They were able to terminate and withdraw the study anytime without prior notice.

Inclusion criteria

1) Children between 6-10 years old who were diagnosed with mild autism by the child and adolescence psychiatrist with healthy condition. They weren't diagnosed mental retardation or any conditions that could possibly interrupted visual learning process.

2) Children who have never had dental treatment

3) Children whose parents signed the consents for participating the study

Exclusion criteria

1) Children who have medical compromised conditions

2) Children who have urgent dental problems and need emergency treatment

3) Children who have known allergy which used in the study

Experimental design and procedures

Sample size

Required calculation sample size is 20 (10 per group) by nQuery Advisor software program (p= 0.05, 80% power) which expected effective of visual pedagogies to enhance cooperation by 80% and cooperation in the control group expected to increase by 20%.

Materials

1. Color picture album of prophylaxis professional fluoride (PPF) procedure. Pictures are developed by a computer and easy to duplicate. There are totally 14 pictures (table 1).
2. Mouth mirror, explorer, cotton pliers
3. Fluoride trays (size S were used for primary dentition and M for mixed dentition)
4. 1.23% Acidulated phosphate fluoride gel
5. Saliva ejection
6. Rubber cup
7. Fluoride paste

Procedures

Once parents had signed the consents to allow their child to participate in the study, an appointment would be scheduled for oral examination, which is a behavior baseline in dental visit of each child. VDO media had recorded an appearance of the patients

Table 1 14 color pictures album of PPF

Equipment	- Slow speed dental hand piece with rubber cup
	- Fluoride prophylaxis paste
	- Fluoride tray
	- Dental floss
	- Salivary ejector
Procedures	- A child is lying in dental unit
	- A child is open his mouth
	- An open mouth of a child with teeth set and slow speed hand piece with rubber cup on one tooth
	- A child is rinsing mouth
	- An open mouth of a child with teeth set is being flossed
	- A child is holding a fluoride tray in the mouth with salivary ejector hanging on of the mouth
	- A sandglass
	- A salivary ejector is placed into a child's mouth
	- Happy child, parent and dentist

for the whole period since the patients entered the dental room. Same dialogue will be applied to every patients and technique of Tell-Show-Do (TSD) had been employed to manage patients' behavior. After oral examination, the patients will be randomly assigned into either two groups: study group (S) and control group (C).

Study group: 2 days before the next appointment, the patients in this group will be prepared for the PPF procedure by visual pedagogy training

VP training: Staffs of Ward 4th demonstrate and describes set of provided pictures of dental instruments, setting and steps of PPF procedures simultaneously in order. At the back of each pictures, where will be a set of words that is aimed for the staffs to explain to the patients. This procedure will be repeated once a day for 2 days. Each day, VP is trained until the first to the last pictures of PPF procedures. However, this procedure will be terminated if the patients have lost their concentration. The staffs will record an examination time and training result every day.

After VP training was completed, next day appointment for PPF procedures will be scheduled. In this visiting, the above procedure will be performed by the dentist from the start to finish. The dentist will talk to the patients with the same dialogue and used TSD technique and the same VP album, which the child was trained before to help the child pass through the steps. The child's behavior would be record in the VDO tape in the same previous visit.

Control group: the PPF procedures would be perform in the same interval as VP group. The dentist would be communicating with the child in the same dialogue and technique as same as VP group but without VP album. The child's behavior would be recorded in VDO tape.

In each visit of each child, the dentist will record time that the child use for sitting on the chair and the tape would be replayed to two independent observers for rating the child cooperation according to Melamed's Behavior Profile Rating Scale[21]

Melamed's Behavior Profile Rating Scale (MBPRS)

MBPRS was developed by Melamed, Weistein, Hawes, and Katin-Borland in 1975 in order to measure the behavior of the child in the dental situation. The scale consists of 27 child-related behaviors, which are considered to be indications of dental anxiety of fear (Table 2). Each behavior is weighted by a factor that reflects the degree of its disruptiveness. These total score is obtained by multiplying the frequency at which a behavior occurs (across-3-min intervals) by its weighted factor. These weighted frequencies are then added across categories and the sum was divided by the number of 3-min intervals. The total MPBRS score was a measure of the average frequency of fear-related behaviors per 3-min interval. The advantages of MBPRS over the others measurement was that measures the behavior of the child more precisely. The weakness of MPBRS is disruptive behavior occur out of 3-min interval resulting in no record of this behavior then mistake of measurements was happened. MBPRS measures had high reliability (inter-rater reliability coefficients ranging from 0.81-0.99) and moderate validity[22]. MBPRS was the preferred behavioral measure of dental anxiety in children and situated for this study than others behavioral measurement techniques.

For this study cut away four of the items of the child that upon when separate from mother because all subjects were admitted patient of 4th ward and others two items that not involved the PPF procedure.

Table 2 Melamed's Behavior Profile Rating Scale (MBPRS)

	Successive 3-min observation period								
	1	2	3	4	5	6	7	8	Etc.
Office behavior									
(1) Inappropriate mouth closing									
(1) Choking									
(2) Won't sit back									
(2) Attempts to dislodge instrument									
(2) Verbal complaints									
(2) Overreaction to pain									
(2) White knuckles									
(2) Negativism									
(2) Eyes closed									
(3) Verbal message to terminate									
(3) Refuses to open mouth									
(3) Rigid posture									
(3) Crying									
(3) Dentist using loud voice									
(4) Kicks									
(4) Stands up									
(4) Rolls over									
(5) Dislodges instruments									
(5) Refuses to sit in chair									
(5) Faints									
(5) Leaves chair									

*Cut away four items of the child upon separation of the mother and two items that not involved the PPF procedure.

Independent observers

Two independent observers who were evaluated dental behavior of these children in each procedure, are pedodontists. They had the same experience to dental treatment in children and had received Thai board of Pediatric dentistry already.

The statistical analysis

The statistical analysis was applied by using the SPSS software version 18.0 (Chicago, IL). Mean chronological age and sex of each group will be described by statistic descriptive. The interclass correlation coefficients with 95% confidence intervals(95% CI) (ICCs) of two independent observers was calculated to determine the inter-rater reliability of the scale. The primary outcome was obtained by MBPRS and the accomplished of the PPF procedure is secondary outcome. MBPRS will be compared between two groups by Mann-Whitney test. Behavior in each child will be compared between pre and post VP by percentile. The correlation of visual pedagogies used and the accomplished of the PPF procedure was

calculated by odds ratio. A p value of $\leq$ .05 was considered to be a significant difference.

Results

No patients withdraw during study. Twenty patients with autism, eighteen males and two females; participated in this study. They were divided into 2 groups as shown in Table 3. The patients have mean age at 6.83 years with a range of 6 to 10.42 years. None of them needed emergency dental treatment. The index of reliability between two independent observers was 0.85.

Oral examination

All patients accomplished oral examination, even if some of them had initially denied sitting on a dental chair. Mean of MBPRS of the control and the study group is 0.7 and 2.03, respectively. Period of chair time has a mean at 2.68 and 3.58 minutes for the control and the study group, respectively. All results were shown in table 4.

Professional prophylaxis fluoride (PPF)

For this procedure 16 patients were completed while only 4 patients failed. One of the four patients refused to sit when he saw equipments that were prepared for PPF procedure. While the rest, one from the study group, refused to hold the fluoride tray in their mouth. Mean of MBPRS in the control and the study group was 1.79 and 0.39, respectively. The mean chair time of the study group was less than control group (9.43 and 11.58 respectively). All results were shown on table 5.

Child's behavior in dental visit

From the MPBRS: scale zero is the best positive behavior, also, the higher scale, and the more negative behavior. Individual behavior was examined by the result of MPBRS of oral examination minus

Table 3 Patient characteristic in each group

	Male (N)	Female (N)
Control group	8	2
Study group	10	-

Table 4 Results of oral examination for each group

Group	Mean of MBPRS	Chair time (minutes)	Number of Accomplished Patients (N)	Number of Failed Patients (N)
Control group	0.7	2.68	10	-
Study group	2.03	3.58	10	-

Table 5 Results of PPF for each group

Group	Mean of MBPRS	Chair time (minutes)	Number of Accomplished Patients (N)	Number of Failed Patients (N)
Control group	1.79	11.58	7	3
Study group	0.39	9.43	9	1

Table 6 MPBRS score of individual in oral examination and PPF procedure

Group	ID.	MPBRS of oral examination	MPBRS of PPF procedure	Different of MPBRS	Behavior
C	1	4.00	3.25	0.75	+
C	2	2.00	3.37	-1.37	-
C	3	0	0.50	-0.5	-
C	4	0	0.75	-0.75	-
C	5	1.00	2.50	-1.50	-
C	6	0	0.50	-0.50	-
C	7	0	0.25	-0.25	-
C	8	0	0.25	-0.25	-
C	9	0	5.75	-5.75	-
C	10	0	0.75	-0.75	-
VP	11	0	0.67	-0.67	-
VP	12	0	0	0	+
VP	13	0	0.50	-0.50	-
VP	14	0	0	0	+
VP	15	0	0	0	+
VP	16	9.5	0	9.50	+
VP	17	0	0	0	+
VP	18	5.25	1.63	3.62	+
VP	19	5.5	1.09	4.41	+
VP	20	0	0	0	+

Abbreviations: C = control, VP = visual pedagogies, - = negative, + = positive

Table 7 Result of individual behaviors for each group

Group	Positive behavior	Negative behavior
Control group	10%	90%
Study group	80%	20%

MPBRS of PPF procedures. Result of positive behavior will be showed if result was greater than or equal to zero. In contrary, if the result was less than zero, it means negative behavior occurred. MPBRS score of individual in oral examination and PPF procedure were shown in table 6. Result of individual behaviors for each group was shown in table 7.

The study group had shown a statistically significant MPBRS compared to control group (Z -2.38, p = 0.017). No correlation between the used of visual pedagogies and completed of PPF procedures but the study group had more 3.9 times (Odds ratio = 3.9, 95% confidence interval = 0.326-45.570) of numbers to complete this procedure than the control group.

Table 8 VP training time of study group

ID.	1st VP time	2nd VP time	Total VP time
1	8	4	12
2	8	5	13
3	6	4	10
4	7	4	11
5	7	4	11
6	7	4	11
7	8	5	13
8	7	4	11
9	5	4	9
10	6	5	11

Visual Pedagogies (VP) training

All patients in the study group were achieved VP training. In the second VP training, all patients were able to remember the pictures. As the result, mean of the first and the second VP training time are 6.9 and 4.3 minutes, respectively (Table 8). The second VP training time was less than the first training for all patients. Mean of total VP training time (sum of the first and the second VP training time) for the study group is 11.20 minutes.

Discussion and Conclusion

In this study, the result showed the effectiveness of visual pedagogies in order to enhance the cooperation for professional prophylaxis fluoride procedures. The PPF procedure's MBPRS of study group showed more cooperative up to 80% while the control group had 10%. When compared between groups, the study group had more statistic significant cooperation than the control group (Z -2.38, p = 0.017). Although, the use of VP not correlation with the completed of PPF procedure. The study group provided the numbers of completed PPF procedures more than the control group 3.9 times (Odds ratio = 3.9, 95% confidence interval = 0.326-45.570).

Every subject in this randomized control trial study has the same criteria, such as same age range (6-10 years old), no experience on dental treatment, mild severity of ASD, admitted in day care program of 4th ward of Yuwaprasart Waithayopathum Hospital and received any intervention programs to cure their problems. All subjects were divided to two groups, which are the study and the control group. To obtain the most reality of visual pedagogies, all factors, which are able to influence the study results, were controlled. The record behavior of each child during oral examination procedures as baseline behavior to compare behavior during professional prophylaxis fluoride procedures provide result of visual pedagogies training and use for communicate.

Since communication is one of the problems for people with autism, these people usually have impairment in expressive language and conversation that could cause behavior management by using "Tell-Show-Do" technique in adequately beneficial. The using of visual pedagogies to communicate the children with autism during dental treatment took them to understand dentist's verbal expression. Furthermore, pre-dental visit instruction to these children by using visual strategies was preparing them before

actual dental situation occurred. It was a desensitizing technique to help the children with autism to transfer themselves to a new situation or environment.

The effectiveness of visual pedagogies in this study revealed the opportunity for dental treatment in children with autism excepting any restrained or pharmaceutic treatment. Visual pedagogies are constructed easily and inexpensive. All dentists can make it by camera or drawing. It is not criteria to build the VP certainly. The number of pictures or steps of any dental procedure is up to the capability of the children to learn. VP can placed anywhere not only at dental setting and everyone can used it to communicate with autism children. Dentist should not be disregard the advantage of VP. It is suitable alternative technique of dental care that convenient for children with autism. Above of all, to emphasize parents and caregivers to realize the importance of dental treatment must be done the first. If the parents and caregivers neglect the dental care, VP for dental aspect will not unuseful. Dentists and government should be raise the importance of dental care to be a policy for a good quality of life of all children with autism.

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References

1. Williams JG, Higgins J P T and Brayne C E G. Systematic review of prevalence studies of autism spectrum disorders. Arch Dis Child 2006;91:8-15.
2. Stephen A. Payle snd Jinous F. Tahmassebi. Paediatric dentistry in the new millennium: 2 behaviour management-helping children to accept dentistry. Dent Update 2003;30:294-8.
3. Lowe O, Lindemann R. Assessment of the autistic patient's dental needs and ability to undergo dental examination. J Dent Child 1985;52:29-35.
4. Shapira J, Mann J, Tamari I, et al. Oral health status and dental needs of an autistic population of children and young adults. Spec Care Dent 1989;9:38-41.
5. Cheen Y. Loo et al. The caries experience and behavior of dental patients with autism spectrum disorder. J Am Cent Assoc 2008;139:1518-24.
6. Baker A, Lane A, Angley M, Young R. The relationship between sensory processing pattern and behavioral responsiveness in autistic disorder. J Autism Dev Dis 2008;38:867-75.
7. Leah I. Stein, José C. Polido, Zoe Mailloux, Gina G. Coleman, Sharon A. Cermak. Oral care and sensory sensitivities in children with autism spectrum disorders. Spec Care Dentist 2011;31:102-10.
8. Fee, V.E., and Matson, J.L. Definition, classification and tawonomy. In J.K. Luiselli, J.L. matson and N.N.Singh(eds.), Self-injurious behavior: Analysis, assessment, and treatment. New York: Springer-Verlag 1992:3-20.

9. Duerden E.G., Oatley H.K., Mak-Fan K.M., Taylor M.J., McGrath P.A., Szatmari P., Roberts S.W.. Risk factors associated with self-injurious behaviors in children and adolescents with autism spectrum disorder. J Autism Dev Dis 2012 Mar 16 (Epub ahead of print)
10. Ross-Russell M, Sloan P. Autoextraction with a child with autistic spectrum disorder. Br Dent J 2005;198: 473-4.
11. Sasso, G. M., Melloy, K. J., & Kavale, K. Generalization, maintenance, and behavioral co-variation associated with social skills training through structured learning. Behav Dis 1990;16:9-22.
12. Jeremy P.Autism. Clin Evidence 2010;10:332.
13. McConachie H, Randle V, Hammal D, Le Couteur A. A controlled trial of a training couse for parents of children with suspected autism spectrum disorder. J Pediatr 2005;147:335-40.
14. Yoder P, Stone WL. A randomized compairson of the effect of two prelinguistic communication interventions on the acquisition of spoken communication in preschoolers with ASD. J Speech Lang Hear Res 2006;49:698-711.
15. Ozonoff S, Cathcart K. Effectiveness of a home program intervention for young children with autism. J Autism Dev Dis 1998;28:25-32.
16. Tissot C, ROY EVANS. Visual teaching strategies for children with autism. Early Child Dev Care 2003; 173:425-33.
17. Stephen A. et al. Paediatric dentistry in the new millennium: 2.behaviour management-helping children to accept dentistry. Dent Update 2003;30:294-8.
18. Marshall J. et al. Parental attitudes regarding behavior guidance of dental patients with autism. Pediatr Dent 2008;30:400-7.
19. Bäckman B.,Pilebro C. Visual pedagogy in dentistry for children with autism. J Dent Children 1999;66: 325-31.
20. Pilebro C., Bäckman B. Teaching oral hygiene to children with autism. Int J Pediatr Dent 2005;15:1-9.
21. Melamed, B. G., Weinstein, D., Hawes, R. R., & Katin-Borland, M. Reduction of fear-related dental management problems with use of filmed modeling. JADA 1975;90:822-6.
22. Irene H.A. Aartman, Ton van Everdingen, Johan Hoogstraten and Albert H.B. Schuurs. Apprasial of behavioral measurement techniques for assessing dental anxiety and fear in children : A review. J Psych 1996;18:153-71.
23. Leah I. Stein, José C. Polido, Zoe Mailloux, Gina G. Coleman and Sharon A. Cermak. Oral care and sensory sensitivities in children with autism spectrum disorders. Spec Care Dentist 2011;31:102-10.

Original Articles/นิพนธ์ต้นฉบับ

บทบาทของการใช้รูปภาพช่วยสื่อสารเพื่อเพิ่มความร่วมมือในกระบวนการเคลือบฟันด้วยฟลูออไรด์ในผู้ป่วยออทิสติกระดับความรุนแรงน้อย ณ โรงพยาบาลยุวประสาทไวทโยปถัมภ์

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[2]ภาควิชาวิทยาศาสตร์วิทยาศาสตร์สื่อความหมายและความผิดปกติของการสื่อความหมาย คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล

บทคัดย่อ

การวิจัยครั้งนี้เพื่อประเมินประสิทธิภาพของการใช้สมุดภาพในการสื่อสารกับผู้ป่วยออทิสติกสำหรับการรักษาทางทันตกรรมง่ายๆ โดยเลือกขั้นตอนการขัดฟันเคลือบฟลูออไรด์ ทำการศึกษาในผู้ป่วยออทิสติกประจำหอผู้ป่วย ใน 4 โรงพยาบาลยุวประสาทไวทโยปถัมภ์อายุ 6-10 ปี ที่มีความรุนแรงของโรคระดับน้อยและไม่เคยรับการรักษาทางทันตกรรมมาก่อน จำนวน 20 ราย ทำการตรวจช่องปากผู้ป่วยทุกคนโดยปรับพฤติกรรมด้วยวิธีบอก-แสดง-ทำ จากนั้นสุ่มจับฉลากแบ่งผู้ป่วยออกเป็น 2 กลุ่มเท่าๆกัน คือกลุ่มศึกษาและกลุ่มควบคุม ผู้ป่วยกลุ่มควบคุมจะได้รับการนัดหมายขัดฟันเคลือบฟลูออไรด์ หลังจากตรวจช่องปากไปแล้ว 7 วันและปรับพฤติกรรมด้วยวิธีบอก-แสดง-ทำเพียงอย่างเดียว ผู้ป่วยกลุ่มศึกษาก่อนวันนัดหมายขัดฟันเคลือบฟลูออไรด์ 2 วันจะได้รับการสอนจากเจ้าหน้าที่ประจำหอผู้ป่วยด้วยรูปภาพวาดอุปกรณ์และขั้นตอนการขัดฟันเคลือบฟลูออไรด์ พร้อมบันทึกเวลาที่ใช้ในการสอนโดยสอน วันละ 1 ครั้ง ในวันที่ทำการขัดฟันเคลือบฟลูออไรด์ของผู้ป่วยกลุ่มนี้ทันตแพทย์จะนำรูปภาพชุดเดียวกันมาช่วยสื่อสารกับผู้ป่วยขณะรักษา โดยในแต่ละครั้งของการนัดหมายมีการบันทึกภาพเคลื่อนไหวพฤติกรรม ที่เกิดขึ้นเพื่อให้ทันตแพทย์เฉพาะทางสำหรับเด็ก 2 ท่านที่ไม่ได้ทำการรักษาทำการประเมินพฤติกรรม ตามเกณฑ์ความร่วมมือของ Melamed's behavior profile rating scale พบว่าผู้ป่วยกลุ่มศึกษามีพฤติกรรมในทางที่ดีเพิ่มขึ้นถึงร้อยละ 90 ในขณะที่กลุ่มควบคุมมีพฤติกรรมในทางที่ดีเพิ่มขึ้นเพียงร้อยละ 10 และเมื่อเปรียบเทียบระหว่างสองกลุ่ม พบว่ากลุ่มศึกษามีพฤติกรรมพของการขัดฟันเคลือบฟลูออไรด์ในทางที่ดีเพิ่มขึ้นจากการตรวจช่องปากอย่างมีนัยสำคัญทางสถิติที่ระดับความเชื่อมั่นร้อยละ 95 และผู้ป่วยในกลุ่มศึกษาทุกคนใช้เวลาในการเรียนรูปภาพน้อยลงจากการเรียนครั้งแรก

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