

dura's work on observational learning.⁵ A detailed example of classical conditioning that relates to development of medical and dental fears, and the processes of generalization versus discrimination, and reinforcement versus extinction are discussed. Because many of children's fears may have been learned through this type of conditioning, it is important for dentists to understand these concepts. Skinner's theory of operant conditioning includes many useful concepts for altering the child's behavior to help him or her become a better dental patient. Four types of operant conditioning are defined: positive reinforcement, negative reinforcement, omission, and punishment. Examples of the use of each type of conditioning in the dental office are given, and commendation is made that positive and negative reinforcement be used most frequently, since omission and punishment can produce conditioned fear. Observational learning is discussed in relation to two stages, imitation and actual performance, and factors affecting both acquisition and performance are discussed. Observational learning (or modeling) is an effective way to teach the child patient, and examples are given of

how both good and bad behavior can be easily learned in the dental office through observation.

These slidetapes serve as an introduction to the principles of child patient management and the importance of understanding the child's emotional needs and intellectual capacities at each stage of development. With this knowledge dentists can effectively relate to and communicate with the child. The environmental determinants of the child's behavior are also analyzed, and methods of altering the antecedents and consequences of behavior are suggested to help the child learn to be a cooperative patient.

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Criterion-referenced Self-instructional Format for Teaching Child Management Skills in the Clinic

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Students in the pediatric dentistry program at Case Western Reserve evaluate themselves and are evaluated by faculty, using a list of criteria for behavioral management skills. At least once during their pediatric dentistry block assignment, students are videotaped during a restorative procedure, in which they are required to demonstrate behavior management skills. The tapes are then reviewed, and the students' performance is eval-



uated both by the students involved and by a faculty member.

The management criteria are printed on daily clinic record form and represent abbreviated statements of more detailed objectives presented in the accompanying didactic course. The skills for which criteria are listed (see Figure 1) fall into two categories and are evaluated accordingly: for skills routinely used once during a restorative procedure accomplishment is indicated by a Yes or No response; for skills used throughout the procedure degree of accomplishment is indicated by 1, 2, or 3 (1 indicates that the opportunity arose for the student to demonstrate a certain skill and that the student demonstrated that skill, 2 indicates minor deviation from the ideal, 3 indicates repeated or serious deviation from the ideal).

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YES	NO	• Begin at appointed time	YES	NO	
		• Address child by name	YES	NO	
		• Comment on child's activity, dress, or interest	YES	NO	
		• Tell procedures to perform	YES	NO	
		• Examine treatment area	YES	NO	
		• Begin injection 2 minutes from faculty check	YES	NO	
		• Conceal syringe	YES	NO	
		• Tell momentary discomfort	YES	NO	
		• Tell most unfavorable part over	YES	NO	
		• Profound anesthesia	YES	NO	
		• Dam placement when anesthesia profound	YES	NO	
		• Tell/Show/Do	YES	NO	
		Rubber dam			
		Handpiece	YES	NO	
		Restorative materials	YES	NO	
1	2	3			
		• Use innocuous words	1	2	3
		• Center attention on child	1	2	3
		• Direct immediate behavior by command	1	2	3
		• Physically contact child	1	2	3
		• Provide specific feedback	1	2	3
		• Tell tangible effects of behavior	1	2	3
		• Acknowledge child's experiences	1	2	3
		• Restrain disruptive movement	1	2	3
		• Tell procedures accomplished	YES	NO	
		• Make positive statement of behavior	YES	NO	

Figure 1. Criteria for Behavior Management Skills as Seen by Students on the Daily Clinical Measurement Sheet

This format has several advantages. The list of criteria on the daily record provides a reference point after an extensive module on behavior management principles. It also helps reduce the number of situations when the

student says, "I have mastered the didactic material, but now what do I do with the child?" Exact criteria allow students to evaluate their own performance, and immediate feedback reinforces instruction. Standardized criteria provide continuity for different faculty members. Accessibility and compactness facilitate use. Finally, performance measurement is compatible with that of other clinical procedures.

However, this format has some disadvantages as well. Only verbal skills can be evaluated, although including nonverbal management skills is a logical extension. Also, all criteria are stated positively, making the evaluation of common undesirable student actions, such as coercing the child, difficult.

The evaluation of the student-patient videotape has proved to be both a practical and an excellent learning experience. The tape is usually discontinued at the point where the student begins to use the handpiece—generally 10–12 minutes. Most criteria can be measured during this period. The student's performance is considered successful if a predetermined percentage of the criteria is fulfilled; if unsuccessful, the student tries again. The highly structured format allows routine use for all students. Thus, mastery of skills can be a requirement and not merely an option. The evaluation sessions provide a starting point for discussions that usually include positive feedback. Students and faculty almost always continue the discussions about specific actions of the student or child.