

*USING BRIEF ASSESSMENTS TO EVALUATE  
ABERRANT BEHAVIOR MAINTAINED BY ATTENTION*

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We examined the use of brief functional assessments to identify idiosyncratic variables associated with aberrant behavior maintained by positive reinforcement in the form of attention. Two participants with severe developmental disabilities and their parents were involved in the assessment and treatment evaluation process. A modified attention condition was introduced, which involved both parents interacting with a third person. Results of the assessment demonstrated that aberrant behavior occurred only in the modified attention condition for both participants. Treatment consisted of the parents delivering attention on a fixed-time schedule during this specific social context. Results indicated that the treatment reduced problem behavior. Follow-up evaluations with 1 participant indicated maintenance of treatment effects for up to 6 months.

DESCRIPTORS: aggression, functional analysis, self-injurious behavior, severe mental retardation

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A substantial amount of research has now demonstrated that experimental functional analysis methods can effectively and efficiently identify contingencies that maintain aberrant behavior (Derby et al., 1992; Iwata et al., 1994). Although the overall results of commonly used functional analysis protocols are positive, there remains a substantial subgroup of individuals for whom such procedures do not reveal maintaining contingencies. This seems to be particularly true with brief assessments (i.e., assessments lasting approximately 90 min) that are conducted in outclinic settings. For example, in the Derby et al. evaluation, 37% of individuals did not display any aberrant behavior during assess-

ment. The failure of brief assessments to identify maintaining contingencies with certain individuals may be due to the idiosyncratic nature of environmental stimuli that evoke and maintain aberrant behavior (Carr, Yarbrough, & Langdon, 1997).

In the present study, we conducted brief functional assessments for 2 individuals with severe developmental disabilities. No aberrant behavior occurred for both individuals under escape and attention functional analysis conditions based on typically used methods (e.g., Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). A subsequent analysis revealed that both individuals engaged in attention-maintained aberrant behavior under a specific social context (when parents were engaged in social interactions with a third person). A treatment derived from the results of these functional analyses was then implemented.

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## METHOD

*Participants, Target Behaviors, Settings, and Observation*

Ole was 22 years old and had been diagnosed with severe mental retardation and Fragile X syndrome. He had no expressive language but responded to familiar instructions and was independent in feeding and toileting. He lived at home with his parents and two brothers. He received Risperidone (1 mg daily) throughout the study. Lena, a 9-year-old girl with a diagnosis of severe mental retardation, lived at home with her parents and younger brother. She used a limited number of one-word utterances (e.g., "mammy," "daddy," "home") and responded to a small number of familiar requests. She was independent in toileting and feeding. She received Thioridazine (25 mg daily) throughout the study.

Target behaviors for Ole included pushing (running towards his parents and hitting them with his shoulder) and pinching (grasping exposed flesh with his index finger and thumb). Attempts at pushing and pinching were scored during the assessment. For safety purposes, parents were instructed to block pinching (grasp and remove Ole's hand) and to sidestep pushing. Target behaviors for Lena included property destruction (throwing objects such as toys, chairs, etc.) and self-injurious behavior (placing the back of her right hand into her mouth and biting).

Assessments for Ole were conducted in the kitchen of the family home. Two maintenance assessment probes were conducted for Ole in the family-operated grocery store (see below). Assessments for Lena were conducted in an outpatient clinic. Parents conducted all assessment conditions under the supervision of the first author. The functional assessment and treatment evaluation lasted approximately 3 hr per participant.

All assessment, treatment, and follow-up sessions were videotaped. Aberrant behavior

was recorded using 10-s partial-interval recording. Reliability observations were conducted on 34% of all sessions across all experimental conditions. Mean agreement on occurrence and nonoccurrence of aberrant behavior was 94% and 92%, respectively.

*Conditions and Experimental Design*

The parents were trained to implement a series of analogue social conditions that were designed to assess the maintaining contingencies for aberrant behavior (see Iwata *et al.*, 1982/1994). Sessions lasted 10 min and were presented in a multielement format. Four analogue conditions were presented based on information provided by parents in a prior interview.

In the attention condition, the parents did not interact with the participant unless aberrant behavior occurred, at which point one or both of the parents attended to the child for about 10 s. During these sessions the parents interacted with one another approximately every 10 s. Materials such as books and toys were available, but no tasks were required. In the demand condition, Ole and Lena were presented with tasks they had difficulty completing. Tasks were presented continuously throughout the session unless aberrant behavior occurred, at which point the tasks were removed for 10 s or until aberrant behavior stopped. In the noncontingent attention condition, both parents interacted with the participant approximately every 10 s on a fixed-time schedule. No difficult tasks were presented. Finally, a diverted attention condition, based on information obtained from the parents in the earlier interview, was used to assess whether aberrant behavior was maintained by parental attention when the parents' attention was diverted by a third person. This condition was identical to the attention condition with the exception that both parents interacted approximately every 10 s with a member of the clinical team. The participant was ignored

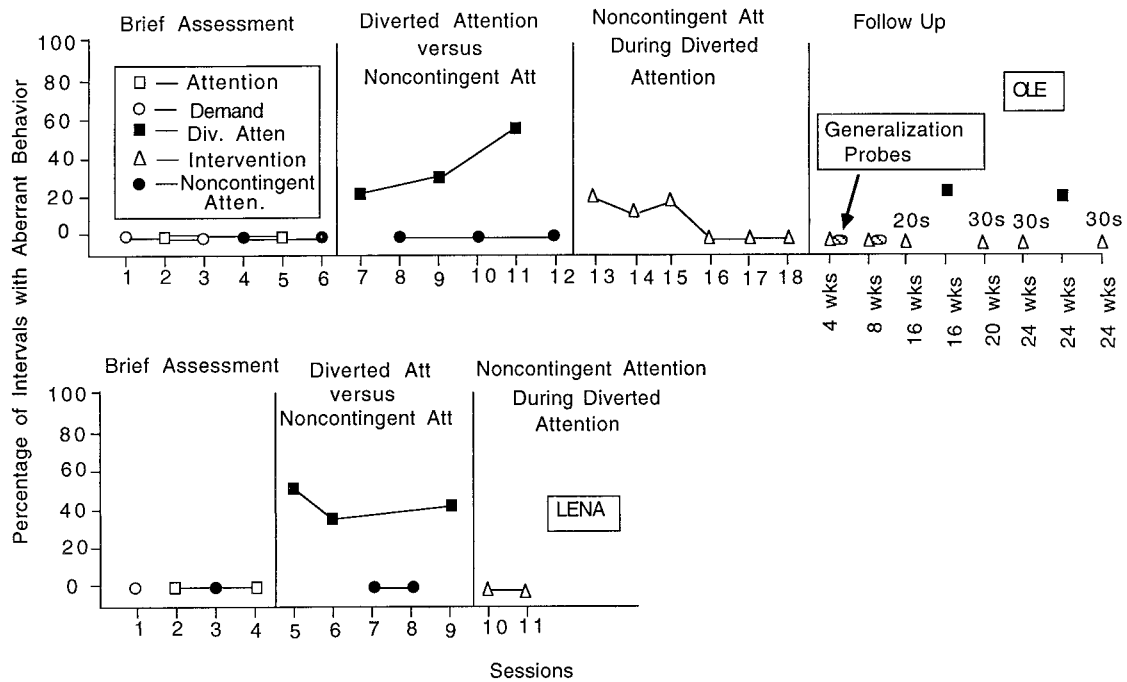


Figure 1. Percentage of intervals with aberrant behavior for Ole and Lena during assessment, treatment evaluation, and follow-up sessions.

unless he or she engaged in aberrant behavior, at which point the parents attended to the participant for approximately 10 s and then continued the conversation with the member of the clinical team.

The assessment and treatment evaluation process consisted of three (for Lena) or four (for Ole) experimental phases. In the brief assessment phase, participants were exposed to three of the functional analysis conditions (attention, demand, and noncontingent attention). In the diverted attention versus noncontingent attention phase, the diverted attention condition was compared with the control (noncontingent attention) condition. The noncontingent attention during diverted attention phase consisted of the parents delivering attention to Ole and Lena on the same schedule as the noncontingent attention condition (every 10 s) in the context of interacting with a member of the clinical team. A follow-up phase was conducted with Ole in the home and local grocery store (staffed

by the parents) at 4, 8, 16, 20, and 24 weeks following the previous assessments. Social conditions similar to those in the noncontingent attention during diverted attention condition were examined. The parents interacted with the first author or with customers in the grocery store while they delivered attention every 10 s during the 4- and 8-week follow-up sessions. The schedule of parental attention was thinned to 20 s and 30 s during the 16-, 20-, and 24-week follow-ups. A brief reversal to the diverted attention condition was also replicated at 16- and 24-week follow-ups. Diverted attention and grocery store probes were 10 min and 15 min, respectively. All other follow-up probes lasted 30 min. No follow-up sessions were conducted with Lena.

RESULTS AND DISCUSSION

The percentages of intervals with aberrant behavior for Ole and Lena are presented in

Figure 1. The results of the brief assessment for both participants showed no occurrence of aberrant behavior under typical functional analysis assessment conditions. Aberrant behavior occurred with both participants when the diverted attention condition was introduced in the second experimental phase of the assessment ( $M = 36\%$ , range, 21% to 60%, for Ole;  $M = 45\%$ , range, 40% to 51%, for Lena). Again, no aberrant behavior occurred during the noncontingent attention condition in this second experimental phase for both participants. The use of noncontingent attention as treatment under the diverted attention condition produced a rapid reduction of aberrant behavior for Ole, whereas no aberrant behavior was observed with Lena. Follow-up observations with Ole at 4, 8, 16, 20, and 24 weeks after the assessment showed no aberrant behavior under the noncontingent attention during diverted attention condition. In addition, Ole's aberrant behavior reemerged when the diverted attention condition was briefly reintroduced at 16 and 24 weeks. Probes at the grocery store also revealed no aberrant behavior for Ole under treatment conditions.

These results demonstrate that aberrant behavior for both participants was maintained by attention when parents interacted with a third person. This specific social context may have been historically associated

with low levels of attention. The results emphasize the potential importance of identifying and including idiosyncratic variables within brief assessments. This study also provides preliminary evidence that time-based schedules can be successfully implemented by parents in community settings over extended periods.

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