EFFECTS OF COMMUNITY AND CENTER-BASED SETTINGS ON THE ALERTNESS OF PERSONS WITH PROFOUND MENTAL RETARDATION

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We studied effects of different settings on the behavior of persons with profound mental retardation. Adaptive (alert) and nonadaptive behaviors were observed in two community settings and a center setting. Results of the descriptive assessment showed that participants engaged in a higher percentage of adaptive behaviors and a lower percentage of nonadaptive behaviors in the "high stimulation" community setting. The results are discussed in light of environmental setting events on persons with profound mental retardation.

DESCRIPTORS: setting events, profound disabilities, activity, alertness

Setting events refer to environmental variables that affect the stimulus-response-consequence relationship in the immediate environment (Wahler & Fox, 1981). Baer, Wolf, and Risley (1987) suggested that identification and management of setting events may affect intervention effectiveness. Assessing whether differences in settings, such as the organization of the physical classroom environment and movement across several instructional locations, affect discrete responding is an initial step in understanding the effects of setting events on learning (McEvoy, 1990). Our purpose was to assess differences in selected adaptive (alert) and nonadaptive behaviors across community and center-based settings for persons with profound disabilities.

METHOD: The 4 participants were adults with profound mental retardation. Each had an extended history of institutionalization. The three settings were the segregated education center attended by the participants and two community settings, one we termed "high stimulation" and the other "low stimulation." The following were held constant across all three settings during observation sessions: (a) absence of instructional training, (b) no food or drink was presented to the participant, (c) less than five verbal interactions by staff were observed, and (d) normal indoor room temperature was maintained. Not more than 10 other people were present in the center at one time during data collection. The variables held constant for all sessions in the high-stimulation community setting were: (a) more than 15 people were present throughout the 20-min session, (b) above-normal indoor lighting was maintained (i.e., participants were seated next to a large window during daylight hours), and (c) a jukebox, radio, and/or television was audible. For sessions in the low-stimulation community setting, the following occurred consistently: (a) fewer than 10 people were present, (b) normal indoor lighting was maintained, and (c) no jukebox, radio, or television was audible, and no television picture was in view.

Response measures, data collection, and experimental design. A 10-s partial-interval procedure was used to record inactivity (behaviors associated with sleep and/or drowsiness), head orienting towards a specific stimulus, movement without orienting (e.g., pacing), and eye contact. (Complete definitions are available from the first author.) The measure for independent variables was a set of observable environmental descriptors that distinguished the high-stimulation community setting, the low-stimulation community setting, and the center setting. On a fixed-time 1-min schedule, the experimenter scored the setting variable using a checklist to ensure that the environment remained constant, as defined above; no changes in those variables were observed. Procedural agreement, assessed on 40% of the sessions, was 100%.

During the initial sessions of this assessment, the experimenter observed each participant in the context of daily events

in each of the three settings per day. Each participant was observed in each setting for 20 min, and there were at least 60 min between the end of one observation and the beginning of the next. The sequencing of the three observations was counterbalanced across days in a multielement design. Agreement data were collected during 32% of the sessions. Mean total, occurrence, and nonoccurrence agreement scores were 89% or higher for each of the responses.

RESULTS AND DISCUSSION: Different patterns of responding were observed for eye contact and inactivity for Mark, Matt, and Dave, whereas different patterns of responding occurred for eye contact and movement without orienting for Nancy. During sessions in the center setting, Mark, Matt, and Dave engaged in a higher percentage of inactivity, and Nancy engaged in a higher percentage of movement without orienting, whereas eye contact and head orienting were observed much less frequently. Conversely, during sessions in the community settings, the 4 participants engaged in a higher percentage of adaptive behaviors (eye contact, head orienting) and a lower percentage of inactivity or movement without orienting.

In general, the results indicate that topographically different settings may serve as setting events that affect responding in those environments. These findings may be important for several reasons. First, the results suggest that environmental stimulation can be an important setting event that affects the relative rates of adaptive and nonadaptive behaviors. Second, in spite of the growing body of literature showing the learning potential of persons with profound retardation, inactivity, purposeless movement, and lack of eye contact are still often thought of as immutable characteristics of this population. The current data show clearly that a simple environmental manipulation can produce substantial changes in these behaviors. Third, the methods used to assess differential responding in the center and community can be used to assess the effects of other potential setting events.

Although we controlled for several variables (e.g., attention, instruction, time of day, persons present), the center and community differed in a variety of ways that could account for the observed differences in responding. For example, the participants spent a great deal more time in the center than in the community setting. Thus, the community settings were relatively novel environments.

Future refinements of the descriptive assessment may provide educators with consistent correlations between specific adaptive and nonadaptive behaviors and structural environmental stimuli. Environmental stimuli suggested by the descriptive assessment might be introduced into the settings correlated with nonadaptive behavior to test the hypothesis. Another direction is to define and assess systematically the variables that maximize novelty or variety for persons with profound mental retardation.

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