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Research Report

A Social Validation Assessment of Cooperative versus Individual Task Engagement of Persons with Multiple Disabilities

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One major objective of programs for persons with severe or profound intellectual and multiple disabilities is to teach these persons occupational and vocational tasks and to enable them to carry out these tasks independently (Davis, Brady, Williams, & Burta, 1992; Lancioni et al., 1991; Steed & Lutzker, 1997). The performance of such tasks has traditionally been conceived as a form of individual engagement (Siperstein & Leffert, 1997). However, recent research has shown that it is possible to enable persons with multiple disabilities, including visual impairment, to work together with peers and to share familiar tasks (that is, to engage cooperatively in task--hereafter "cooperative task engagement") (Lancioni, O'Reilly, Cognini, & Serenelli, 2001; Lancioni, O'Reilly, & Oliva, 2002).

Cooperative task engagement is considered useful for helping persons with multiple disabilities overcome the isolation that reduces their sensory input and social opportunities and may be preferred by the persons over individual engagement in tasks (Lancioni et al., 2001, 2002). These two aspects seem relevant, particularly since many of these persons are likely to spend nearly all their activity time with peers with disabilities and could therefore be involved in programs of cooperative task engagement with these peers.

In spite of the potential benefits and desirability of cooperative task engagement, no attempts have been made to check the social validity of this condition for rehabilitation personnel who are in charge of daily programs. Determining the view of these personnel is critical for understanding whether they consider cooperative task engagement a satisfactory and realistic prospect and thus whether it can be adopted in daily programs (Agran et al., 2005; Cunningham, McDonnell, Easton, & Sturmey, 2003; Lancioni et al., 2002; Storey, 1996).

The purpose of this pilot study was to conduct a preliminary social validation assessment of cooperative versus individual task engagement of persons with multiple disabilities. Toward this end, videotapes showing the two task conditions for five adults with multiple disabilities, including visual impairment, were presented to rehabilitation personnel (teachers,

physiotherapists, and occupational therapists), who were asked to rate the two conditions on a six-item, Likert-type questionnaire.

Method

Raters

The raters were 66 rehabilitation personnel, 60 women and 6 men, who were working in an educational center (the same center that served the five adults who were shown in the videotapes). They ranged in age from 23 to 54 (M = 38) years and had experience with a variety of intervention strategies. However, they were not directly involved with the implementation of cooperative task programs or with the five adults who were shown in the videotapes that they were to rate.

Adults with multiple disabilities

The adults who were shown in the videotapes were three women and two men aged 26 to 45 years (M = 35), who received rehabilitation services in a center for persons with multiple disabilities. All five participants were in the profound range of mental retardation, with age equivalents of about 2.5 years for daily living skills (on the Vineland Adaptive Behavior Scales). Three participants (Astrid, Lori, and Dennis) were totally blind and had normal hearing, and the other two (Lorna and Martin) were profoundly deaf and had minimal residual vision (their visual acuity was estimated to be much below 0.1; see Geruschat, 1992). All the

participants could eat independently, were toilet trained, washed themselves with help, and put on clothes without fastening buttons. They did not normally display communication initiatives or requests toward rehabilitation personnel or peers, but responded to a few gestures or object cues (simple gestures or objects that were connected to specific activities) that were presented to them by the personnel. They could perform simple occupational tasks, such as assembling two-component objects and putting objects in containers, individually (and independently). They could also perform these simple tasks or variations of them in pairs (cooperative task engagement), following their previous involvement in cooperative task programs (Lancioni et al., 2001, 2002).

Individual and cooperative task engagement

In the individual- and cooperative--engagement situations, the participants carried out identical or comparable tasks consisting of putting objects in related containers (such as putting shoes into shoe boxes, putting sets of tennis balls into tube containers, and putting candy into cans). These tasks were already used with the participants in the daily context. They were relatively modest and of limited practical or work significance and had been selected in the daily context because they allowed the participants to be successful in their performance and independent of outside help and included age-appropriate material. In the individual situation, task engagement required a

participant to take a container, put an object (or set of objects) into it, put the container away, and then repeat the sequence. In the cooperative situation, two participants shared the task, with one participant taking a container, waiting for the other participant to put an object (or set of objects) into it, putting the container away, and then restarting the sequence. Outside intervention was typically available only for ensuring the transition to a new task.

Videotapes

Six videotapes were available. The first videotape included three four-minute clips showing Astrid (individual engagement), Lorna (individual engagement), and Astrid and Lorna (cooperative engagement), respectively. The second videotape differed from the first only in that the cooperative-engagement clip was first in the sequence (Bourke, Daly, & McGilvray, 1985). The third and fourth videotapes corresponded to the first two but involved Lori and Martin. The fifth and sixth videotapes involved Dennis and Lori; they differed from the previous ones in that they included only two clips; that is, an individual-engagement clip with Dennis and a cooperative-engagement clip with Dennis and Lori. The individual--engagement clip for Lori was not included here because it was already part of the third and fourth videotapes. The participants' families and caregivers were informed of the videotapes and had provided consent to use them for the study.

Procedure and questionnaire

The 66 raters were divided into three subgroups of 22. Members of each subgroup watched (individually or in combinations of 2 to 5) one of the videotapes. Before they watched it, they were told that they would see two participants in two task situations (one involving each participant performing the task individually and the other involving both participants sharing the task). They were also told that they were to rate these situations on a six-item questionnaire covering the social/emotional and practical/rehabilitation domains (for the wording of the items on the questionnaire, see Box 1). For each item of the Likert-type questionnaire, two scores were provided (one for the individual situation and the other for the cooperative situation). The scores could vary between 1 and 5, indicating the least and most positive values, respectively.

The 22 raters who watched one of the first two videotapes received two copies of the questionnaire--one concerning Astrid's individual and cooperative task engagement and the other concerning Lorna's individual and cooperative task engagement. Two copies of the questionnaire were also available for the 22 raters who watched the third or fourth videotapes showing Lori and Martin. The 22 raters who watched the fifth or sixth videotapes received only one copy of the questionnaire for Dennis's individual and cooperative task engagement. Following the

assessment, 22 copies of the questionnaire were completed for each participant by 22 raters.

Results

Figure 1 depicts the scores on the questionnaires for the five participants as a group. The bars indicate the raters' mean scores for the cooperative- and individual-task situations across the six items of the questionnaire. The mean scores for the cooperative-task situation were higher on all the items (with differences ranging from 0.4 to 1.2 points). A paired *t*-test was applied to the scores on the cooperative- and individual-task situations of each item for the five participants as a group (Bourke et al., 1985). The test showed two-tailed statistically significant differences between the scores, favoring the cooperative-task situation, on all the items (with *t*-values ranging from 5.2 to 12.3; $p < .01$). A reliability analysis of the questionnaire scores (using Cronbach's alpha; Cronbach, 1951) revealed that all six items formed a so-called scale (alpha > .84). All the items had a positive (but not 1.0) item-total correlation.

Discussion

The rehabilitation personnel rated the cooperative-task situation as being preferable to the individual-task situation across all the items. This finding suggests that the personnel considered the cooperative-task situation more satisfactory from a social/emotional standpoint (as represented by the first, third, and sixth items of the

questionnaire), as well as from a practical/ rehabilitation standpoint. All the items of the questionnaire seemed to add to the validation assessment in a consistent manner (that is, they were all positively correlated to the total).

The implications of these data for programs for persons with profound and multiple disabilities appear largely unequivocal (see also Storey, 1996). Even so, caution needs to be taken in considering the results for several reasons. The tasks that were available for individual and cooperative engagement were of limited practical or work significance and were not carried out in a real work situation, as current best practices recommend. In addition, the number of raters who were involved in the study was relatively small, as were the number of adults with multiple disabilities who were rated. Thus, a larger number of raters or of persons being rated might have led to different scores. Likewise, one might hypothesize that raters from different educational/ cultural or national backgrounds would provide different ratings (see Dorman, 2003; Schalock et al., 2002; Storey, 1996).

Future research could help answer these questions by extending the number of rehabilitation personnel who are used as raters, replicating the assessment across different cultural (national) environments, including different groups of children and adults with disabilities in the ratings, and ensuring that these persons are involved in more real activity or work situations

(Dorman, 2003; Erbas, Ozen, & Acar, 2004). Consistent replications of the data could support the involvement of many of these people in programs of cooperative task engagement (Rapley & Hopgood, 1997; Romer & Haring, 1994). Such a prospect may prompt rehabilitation personnel who work with these people to take steps to design programs of cooperative task engagement that are satisfactory for the people involved and suitable for the rehabilitation context.

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