Essential Characteristics of Self Determined Behavior of Individuals With Mental Retardation

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Despite increased emphasis on self-determination for individuals with mental retardation, only a few theoretical models have been formulated that specify measurable characteristics for the promotion and evaluation of this outcome. We propose that *self-determination* refers to acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference. Self-determined behavior is autonomous, self-regulated, based on psychological empowerment, and self-realizing. We evaluated this definition by asking participants with mental retardation to complete various instruments that measured self-determined behavior and these essential characteristics. Discriminant function analysis indicated that measures of essential characteristics predicted differences between groups based on exhibition of self-determined behavior.

There has been increased attention in education and disability services to the need to support self-determination for people with disabilities (American Association on Mental Retardation, 1993), driven primarily by advocacy efforts by people with disabilities (Kennedy, 1993; Ward, 1988; Williams, 1989). This increased attention has resulted in efforts to revise policy and develop interventions to promote this outcome. However, with the exception of research on motivation (Deci & Ryan, 1985), there has been limited theoretical development upon which to base these efforts.

Previously, Wehmeyer (1992a, in press, a, in press, b) defined *self-determination* as acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference. Self-determinaion is a dispositional characteristic of an individual. In operational terms, self-determined actions reflect four essential characteristics: autonomy, self-regulation, psychological empowerment, and selfrealization. These four essential characteristics emerge as individuals acquire component elements of self-determination, including choice and decision-making, problem-solving, goal setting, and attainment skills; internal locus of control orientations; positive self-efficacy and outcome expectancies; and selfknowledge and understanding.

A behavior is considered to be *autonomous* if the person acts (a) according to his or her own preferences, interests, and/or abilities and (b) independently, free from undue external influence or interference. Most people are not completely autonomous or independent; therefore, autonomy also reflects

the interdependence of all family members, friends, and other people with whom we interact daily as well as the influences of environment and history.

According to Whiteman (1990), self-regulation:

enables individuals to examine their environments and their repertoires of responses for coping with those environments to make decisions about how to act, to act, to evaluate the desirability of the outcomes of the action, and to revise their plans as necessary. (p. 373)

Self-regulated people make decisions about what skills to use in a situation; examine the task at hand and their available repertoire; and formulate, enact, and evaluate a plan of action, with revisions when necessary. Self-regulation typically includes self-monitoring (observation of one's social and physical environment and one's actions in those environments), self-evaluation (making judgments about the acceptability of this behavior through comparing information about what one is doing with what one ought to be doing), and, based upon the outcome of this selfevaluation, self-reinforcement (the selfadministration of consequences contingent on the occurrence of target behaviors) (Whitman, 1990).

Psychological empowerment consists of the various dimensions of perceived control (Zimmerman, 1990), which includes the cognitive (personal efficacy), personality (locus of control). and motivational domains of perceived control. People who are self-determined act based on their beliefs that (a) they have the capacity to perform behaviors needed to influence outcomes in their environment and (b) if they perform such behaviors, anticipated outcomes will result. Finally, self-determined people are self-realizing in that they use а comprehensive, and reasonably accurate, knowledge of themselves and their strengths and limitations to act in such a manner as to capitalize on this knowledge in a beneficial way. Self-knowledge forms through experience with and interpretation of one's environment and is influenced by evaluations of others; reinforcements, and attributions of one's own behavior.

The definitional framework that we have described and used to examine selfdetermination was derived from interviews with individuals involved in self-advocacy groups for individuals with mental retardation (Wehmeyer, 1992b) and a comprehensive review of the pertinent literature (Wehmeyer, 1992a). The essential characteristics and component elements of this framework have been noted by other researchers (Abery, 1993; Field & Hoffman. 1994: Martin & Marshall. 1995; West, Rayfield, Wehman, & Kregal, 1993), whose work provides preliminary support for the definitional framework. The present study was designed to test this framework empirically. To examine the contribution of essential characteristics of self-determined behavior to the achievement of behavioral outcomes closely associated with self-determination, we conducted a series of structured interviews with individuals from self-advocacy groups. We focused on behaviors commonly associated with self-determination and a series of selfreport measures of essential characteristics of self-determined behavior, as operationalized by the definitional framework.

Method

Participants

The sample included 407 individuals with mental retardation from self-advocacy groups (advocacy organizations established and run by people with mental retardation). We selected 10 states that represented all regions of the United States and that had a state-wide self-advocacy organization. Each state organization nominated two self-advocacy groups with 20 or more members to participate, for a total of 20 groups. Although intelligence scores for participants were not available, several factors suggest that the sample involved people with mental retardation and not other disabilities. Twelve groups were affiliated with local chatpers of The Arc (formerly the Association for Retarded Citizens). The remainder were affiliated with People First organizations, typically open only to people with mental retardation. Five of the groups recruited members through a sheltered workshop and one group, from a state institution for people with mental retardation.

The mean age for individuals in the sample was 36.34 years (standard deviation [SD]=11.28, range=17 to 72). Fifty-five percent of the participants were female (n = 226, mean age = 35.69, SD = 11.36, range = 17 to 72), 45% were male (n = 182, mean age = 37.16, SD = 11.17, range = 19 to 68). Eighty-one percent identified themselves as Caucasian, 9% as African American, 5% *as* Native American, 2.5% as Hispanic, and 2% as Asian American.

Procedure

Informed consent was obtained from all participants or their legal guardians. Project personnel conducted data-collection activities with all but 2 subjects, who were interviewed by their group advisors. Data collection typically occurred in the context of the regularly scheduled self-advocacy meeting. To identify participants who would require specific accommodations, including individual (as opposed to group) administration of assessments and transcription of responses, project personnel met with each group advisor, leaders in the group, and other advisory personnel who knew each participant well. All questions were read aloud, and individuals were assisted in recording their answers and given additional time, if necessary, to complete project activities. A project member was available throughout the interview to assist people who needed additional support. Individuals who had difficulty with the group administration format received additional individual support from this person.

To gather information about level of disability, we asked respondents to evaluate

themselves by answering seven questions designed to assess the amount of assistance they required in the seven areas of "major life activities" that are typically used to determine the presence of a developmental disability (e.g., self-care, learning, mobility, selfdirection, receptive and expressive language, capacity for independent living, and economic self-sufficiency). Participants responded none (0), a little (1), or a lot (2) to each questions. The sample averaged 5.3 points (SD = 3.26, range = 0 to 14), the modal score was 4.00, the median score was 5.0, and 75% of the sample scored 7 points or fewer. Only 16 participants (4%) scored at 12 or above, and only 11.6% scored 10 or more points. This suggests that the sample was composed primarily of individuals with milder cognitive impairments.

Instruments

A series of self-report measures was used to examine each essential characteristic of selfdetermination and self-determined behavior.

Autonomy. The Autonomous Functioning Checklist (Sigafoos, Feinstein, Damond, & Reiss, 1988) is a parent-completed checklist measuring the behavioral autonomy of adolescents. The scale has 78 items and is subdivided into four conceptually distinct subscales: Self and Family Care, Management, Recreational Activity, and Social and Vocational Activity. Questions in the first three domains describe activities to which parents respond by selecting one of five alternatives: (a) does not do; (b) does only rarely; (c) does about half the time there is an opportunity; (d)does most of the time there is an opportunity; and (e) does every time there is an opportunity. Questions in the fourth subscale require a "yes" or "no" answer. Likert-scale responses are scored from 0 (does not do) to four (does every time), whereas dichotomous yes/no responses are scored with 0 or 1. High total (out of 252 possible) and subscale scores indicate that an

individual exhibits behaviors associated with autonomy. Sigafoos et al. (1988) found that the subscales had high levels of internal consistency (coefficient alpha from .76 to .86). There were consistent and significant correlations between each subscale and adolescent leadership experience (.21 to .36) and three of four subscales and number of extracurricular activities (.34 to .45), providing further evidence for construct validity.

The Autonomous Functioning Checklist was adapted in the present study as a self-report measure by presenting instructions and items in first person instead of second person. The 5point Likert format used in the original scale was maintained, with responses made singular and first person. Wehmeyer and Kelchner (1995) found that the factor structure of the self-report version replicated that of the original version and had adequate criterionrelated validity.

The second measure of autonomy was the Life Choices Survey (Kishi. Teelucksingh, Zollers, Park-Lee, & Meyer, 1988), which contains 10 items measuring major life decisions and daily choices. It is completed in an interview format and yields a score reflecting total amount of choice. Respondents answer on a 5-point scale indicating how often they have the opportunity to make decisions and choices. Kishi et al. found that the survey predicted differences in life choices between adults with and without mental retardation. Stancliffe (1995) found a negligible level of acquiescence (1.4% of all responses from adults with mental retardation) in its use.

Self-Regulation. The Means-Ends Problem Solving technique (Platt & Spivack, 1989) examines interpersonal cognitive problemsolving through use of a series of story items portraying situations where a need is introduced at the beginning of a story and satisfied at the end. The respondent completes the story by filling in events that might have occurred to fulfill the need (Platt & Spivack, 1989). Because people with mental retardation require additional time to read the stories (or have the stories read to them) and

to respond and because several of the stories in the Means-End Problem Solving require knowledge not typically held by people with mental retardation, we used only 4 of the 10 scenarios.

Stories are scored according to the number of means, no means, irrelevant means, or no responses provided by the respondent. Platt and Spivack (1989) defined a mean as "any relevant unit of information designed to reach the goal or to overcome an obstacle, a purposeful action taken by someone with the intent to reach a goal" (p. 11). A score of no means was given when the subject failed to provide a response necessary to reach the goal. A score of irrelevant means was assigned for a response that was not effective within the context of the story. There are no limits on the number of means a respondent can generate. The average total number of relevant means identified in the scale's norms (for the four scenes used) was 7.89 for college students and 5.58 for other adults.

The number of relevant means was tallied for each story and added to compute the total relevant means score for each participant. A second rater scored the Means-End Problem Solving for 100 of the participants. Interrater reliabilities for each question (calculated using agreements/agreements + disagreements) were .74, .80, .81, and .86 (Wehmeyer & Kelchner, 1994). Relations between Means-End Problem Solving total relevant means and relevancy ratio scores and conceptually related measures were similar for this group when compared with findings for the population in general. This instrument has been used previously with children who have mental retardation (Healey & Masterpasqua, 1992).

The Children's Assertiveness Inventory (Ollendick, 1984) is a 14-item, yes/no measure assessing the degree to which someone initiates interactions, gives and receives compliments, stands up for their own rights, and refuses unreasonable requests. Higher scores reflect more assertiveness. The scale has adequate test retest reliability (.76) and correlates with other conceptually related measures, including measures of self-concept, locus of control, and role-play assertion (Ollendick, 1984). The questions are all pertinent to adults as well as children.

Psychological Empowerment. This char-acteristic was measured using a locus of control scale and two related measures of social self-efficacy and outcome expectancy. The Adult version of the Nowicki-Strickland Internal-External Scale (Nowicki & Duke, 1974) is a widely used measure of locus of control. People who see themselves as being in control of outcomes in their lives have an internal locus of control, whereas people who perceive outcomes as controlled by others, fate, or chance hold an external locus of control. This scale contains 40 items answered with a "yes" or "no," and higher scores reflect more external orientations. The scale has reported split-half reliability figures ranging from .74 to .86, with test-retest reliability figures ranging from .63 to .76. Although normed with adults without disabilities, the instrument has been used to determine locus of control orientation for individuals with mental retardation 1994a). Wehmeyer (1993, (Wehmever. 1994b) determined that the factor structure of the adult version of the Nowicki-Strickland Internal-External Scale, when used with individuals who have mental retardation, is comparable to that for youth and adults without disabilities and that the scale is reliable for use with individuals who have mental retardation. .

Self-efficacy (the belief that one has the capacity to perform behaviors needed to achieve a specified outcome) and *outcome expectancy* (the belief that if specific behaviors are performed, anticipated outcomes will result) were measured by two related scales. The Self-Efficacy for Social Interactions Scale (Ollendick, Oswald, & Crowe, 1986) measures how sure a respondent is, using a 5-point scale, that they could perform a set of socially related behaviors.

Scores range from 10 to 50, with higher scores indicating more adaptive behavior. Questions on the Outcome Expectancy Measure (Ollendick et al., 1986) replicate those on the self-efficacy measure, focusing instead on the expected outcome if the student AU: performs the described behavior. The scales have adequate reliability (test-retest over a 3-month period of .75 and .78, respectively, Ollendick & Schmidt, 1987).

Self-Realization. The short version of the Personal Orientation Inventory (Jones & Crandall, 1986) is a 15-item measure of an individual's understanding of his or her emotions, abilities and limitations, and the degree to which he or she is influenced by others or by his or her own motivations and principles. Items are answered "yes" or "no," and higher scores reflect higher selfrealization. Jones and Crandall determined that the index had test-retest reliability correlations of .69 and a Chronbach alpha level of .65 and that total scores were with conceptually related correlated measures.

Measuring Self-Determined Behavior. An appropriate indicator of self-determination would be the performance of behaviors generally agreed upon as reflecting this outcome. To measure such behaviors, we used portions. of the National Consumer Survey (Jaskulski, Metzler, & Zierman, 1990), which we had employed previously to examine the self-determination of people with mental retardation (Wehmeyer & Metzler, 1995). Participants responded to a series of questions concerning (a) home and family living, (b) employment, (c) recreation and leisure, (d) transportation, and (e) money management, using nine questions taken directly from the National Consumer Survey (e.g., Did you choose where you live? Do you pay your own bills?). All questions used a common question/response system in which responses were assigned values, ranging from 0 points for the most self-determined response (yes, unassisted) to 4 points for the least (no, agency/staff member). Thus, participants scored from 0 to 36 points on these. nine

questions, and lower scores reflected higher self-determination.

The final domain, personal/leadership, was assessed using six questions generated by project staff. Participants responded "yes" or "no" to each question, with "yes" reflecting a self-determined action and awarded 0 points and "no" indicating a lack of selfdetermined behavior and scored as 4 points. The Personal/Leadership domain, then. accounted for up to 24 points. Scores on the survey could range from 0 to 60, with 60 reflecting the least amount of selfdetermination and 0 indicating the most. Wehmeyer, Kelchner, and Richards (1995) determined that this survey has adequate structural and concurrent validity and internal stability (Chronbach alpha = .82). Total scores for the survey correlated strongly with estimations of level of caregiving needed and independence, with respondents who scored more positively on the survey requiring less support in caregiving and exhibiting greater independence. A Lilliefors test of normality did not reach significance, indicating that the scores approximated a normal distribution. In addition, for a subset of the sample, survey results correlated significantly in the predicted direction with group advisors' ratings of selfdetermination.

Data Analyses

All statistical data analyses were conducted using SPSS for Windows (Norusis, 1992) on a 486-DX4 personal computer. To identify essential characteristics that distinguished between people with mental retardation who were self-determined and those who were not, we conducted a multiple discriminant function analysis. We formed two dichotomous groups based on National Consumer Survey total scores. Scores below the midpoint (30.20) were assigned to the high self-determination group and scores above the midpoint, to the low self-determination group. There were 203 people in the high self-determination group (mean age = 35.3, mean National Consumer Survey score = 20.51) and 204 in the low selfdetermination group (mean age = 37.39, mean National Consumer Survey score = 39.8). Individuals in the low self-determination group had a mean level of disability rating of 6.35, whereas members of the high selfdetermination group averaged 4.2 on the level of disability rating scale. As such, we were concerned with the effects of level of disability on self-determination scores and subsequent grouping. To explore this issue, we conducted a correlation analysis for level of disability scores and total self-determination scores. We were also cognizant of the fact that individuals could have been in the high selfdetermination group because of a selfappraisal halo effect (i.e., they rated more positively themselves than warranted). To check this, we calculated the correlation between self-efficacy scores and total National Consumer Survey scores for each group, hypothesizing that this measure would reflect the degree to which someone reported that they were "effective" and that there would be a more positive relation between total self-determination scores and the efficacy score in the high selfdetermination group if the halo effect were in place.

Results

generated Univariate statistics by the discriminant function analysis procedure indicated differences between predictor variables based on group membership. Table 1 provides the means and SDs for the 11 predictor variables by self-determination group status. Table 2 provides univariate F ratios and p values as well as Wilks' lambdas for each independent variable. As can be seen in Table 2, 9 of the 11 predictor variables reached significance, p < .05, when differences between groups were examined, and in each of those cases the direction of the difference was more favorable for individuals in the high self-determination group (see Table 1).

	Hig self-deter	2	Low self-determination	
Variable	Mean	SD	Mean	SD
Autonomous Functioning Checklist				
Self-Family Care	44.48	15.27	32.21	15.43
Management	51.59	14.87	38.30	16.08
Social and Vocational Activities	13.60	3.40	10.94	3.48
Recreationd and Leisure	36.29	10.52	31.23	10.54
Life Choices Survey	35.00	5.59	32.99	5.84
-	17.64	4.21	18.43	3.96
Nowicki-Strickland Internal-External Scale	35.95	8.24	34.85	8.37
Self-Efficacy for Social Situations Scale	35.29	6.28	35.27	7.62
Outcome Expectancy for Social Situations Scale	40.68	5.67	38.85	5.21
Personal Orientation Inventory	10.88	2.12	10.49	2.16
Assertiveness Scale	3.16	2.20	2.48	1.81
Means-End Problem-Solving				

Means and SDs for Predictor Variables by Self-Determination Group

Table 2

Table 1

Analysis of Discriminating Variables and Canonical Discrimination Functions

Variable	F	Wilks' Iambda
Autonomous Functioning Checklist		
Self-Family Care	57.84**	.88
Management	74.85**	.84
Social and Vocational Activities	65.98**	.86
Recreation and Leisure	23.55**	.94
Life Choices Survey	12.64**	.97
Adult Version of Nowicki-Strickland		
Internal-External Scale	3.82*	.99
Self-Efficacy for Social Situations		
Scale	1.81	.99
Outcome Expectancy for Social		
Situations Scale	.00	1.00
Personal Orientation Inventory	11.55**	.97
Assertiveness Scale	3.40*	.99
Means-End Problem-Solving	11.42**	.97

p < .05. p < .001.

In discriminant analysis the emphasis is on analyzing the variables together instead of just individually. On the basis of all 11 predictor variables, we calculated a single discriminant function with a chi-square of 119.29, p < .001, and omnibus Wilks' lambda of .74. Examination of the canonical discriminant functions evaluated at group means (or group centroids) showed that this discriminant function distinguished the high self-determination group (function = .59) from the low self-determination group (function = -.59), accounting for all betweengroup variability. As shown in Table 3, which shows classification statistics, 71.5% of the cases were correctly classified using this function. A loading matrix of correlations

between predictor variables and the discriminant function, as seen in Table 4, and a review of the means of the predictor variables by group (Table 1) indicates that measures of autonomy, particularly the Management, Social and Vocational Activities, and Self- and Family-Care subscales, were the primary variables distinguishing between groups. Accordingly, measures

Table 3

Classification Results

		Predicted			
		H	ligh	L	.ow
Actual group	n	n	%	n	%
High self-determination					
(High) Low self-determination	203	149	73.4	54	26.6
(Low)	204	62	30.4	142	69.6

Table 4

Loading Matrix of Correlations Between Predictor Variables and Discriminant Function

Predictor	Function 1
Autonomous Functioning Checklist	
Management	.72
Social and Vocational Activities	.68
Self-Family Care	.62
Recreation and Leisure	.41
Life Choices Survey	.03
Personal Orientation Inventory	.29
Means-Ends Problem-Solving	.28
Assertiveness Scale	.15
Adult Version of Nowicki-Strickland	
Internal-External Scale	16
Self-Efficacy for Social Situations Scale	.11
Outcome Expectancy for Social Situations	
Scale	.002

of self-awareness (Personal Orientation Inventory), self-regulation (assertiveness and problem-solving), and psychological empowerment (locus of control), among those that were significantly different between groups, followed in importance. The correlation between total self-determination and level of disability scores for the high and low self-determination groups were both statistically significant, but low, r = .19, p =.006, and r = .22, p = .002, respectively), representing less than 5% of common variation in both groups. There was no significant relation between self-efficacy measures and National Consumer Survey scores for either the low, r = .001, p = .981, or high selfdetermination group, r = -.06, p = .387.

Discussion

We proposed that self-determination could be operationalized by actions that are characterized by four essential features: (a) autonomy, (b) self-regulation, (c) psychologically empowered self-initiation, and (d) self-realization. Individuals who consistently engage in self-determined behaviors could be described as being self-determined. The findings from the multiple discriminant function analysis support this proposal and lend validity to the definitional framework as a viable structure for the development of interventions to promote self-determination.

Analyses revealed significant differences between individuals who engaged in behaviors reflecting self-determination and those who did not on measures from each of the four essential characteristics. These differences were particularly noticeable in measures of behavioral autonomy and choicemaking opportunities, followed by indicators of self-awareness, self-regulation skills such as assertiveness and problem-solving skills, and perceptions of individual control. The fact that measures of autonomy were the primary predictors of differences between groups probably reflects the relative importance of autonomous functioning for self-determined individuals. In addition, however, the findings also may suggest that although individuals were asked to indicate the amount of control and choice they had in various areas of their lives, their responses may indicate the degree to which they engaged in activities. As such, there is such undoubtedly overlap between the measures of autonomy and the instrument we used to measure self-determination. The overlap between measures and use of self-report indicators with people who have mental retardation probably accounts for the fact that a relatively modest percentage of the cases, 71.5%, was classified correctly, leaving 28.5% misclassified. Such classifycation statistics must be compared with the percentage expected to be classified simply by chance. In the case of two groups, as in this analysis, one would expect 50% of the classes to be classified correctly by chance alone, a figure well exceeded by the actual cases classified correctly.

We used self-report measures of selfdetermination and related behaviors. Because of concerns about the use of such scales with people with mental retardation, we compared self-report scores with other indicators whenever possible to ensure that the measures were valid (see Instruments). Second, when possible we compared the factor structure of the assessment with those established with other populations and examined both internal consistency and testretest reliability. Third, to rule out the possibility that self-determination group assignment was a function of a self-appraisal halo effect, rather than real differences in self-determination, we examined correlations between self-efficacy and National Consumer Survey scores for each group. In both cases the correlation between these scores was nominal (+.001 and -.06). Instead of seeing a higher, positive relation between self-efficacy ratings and National Consumer Survey scores for the high self-determination group, as we might expect if a halo effect were in place, there was a negative relation between these

scores for the high self-determination group. This does not negate the possibility that differences reflect factors other than those proposed, but the consistency with which differences emerged, the size of the sample, and the previously noted checks and balances make that less likely.

Several other factors warrant consideration. Individuals who responded to a given item with an other, not applicable, or unknown response were awarded the mean score for the group as a whole on that question. This procedure was followed so that we would not unfairly "punish" someone for something that was not applicable to their life (e.g., if someone lived at home, they would not choose staff people and may not choose a roommate, simply because they do not have any). On the other hand, this strategy had the potential to award someone who did not know a given answer (and presumably was not self-determined) a more favorable score. We decided to err on the side of not punishing individuals for answers that were not applicable.

The method of describing level of disability did not, nor was it intended to, measure level of mental retardation. This raises concerns as to whether (a) all the subjects had mental retardation and (b) all respondents were able to understand the various measures. As to the first concern, the population from which the sample was drawn was composed of individuals involved in self-advocacy groups specifically organized for people with mental retardation and associated with chapters of The Arc. Further, many of these participants were employed by or living in programs for people with mental retardation. Although these procedures do not guarantee that all participants had mental retardation, we believe that the restricted population from which the sample was drawn ensures that the vast majority of participants were individuals with mental retardation. Despite perceptions to the contrary, our experience has been that most members of self-advocacy groups are

neither more nor less self-determined than most individuals with mental retardation. Their experiences related to control (or the lack thereof) are no different than those of most people with mental retardation, and we believe, therefore, that these findings can generalize to other people with mental retardation. To address the second concern, we worked closely with group advisors to identify participants who could meaningfully participate and provided any accommodation a person might need to complete project activities.

There was a relation between the severity of the individual's disability level and the total self-determination score. The possibility exists that by dividing the sample into low and high self-determination groups, we were, in essence, dividing the sample according to level of disability. Thus, significant differences might be attributable to level of disability and not other factors. However, we do not believe that this was the case. There were weak relations between level of disability and total scores for both groups, rs = .19 and .22, respectively, and the mean level of disability scores differed by 2.2 out of 14 total points, or by less than one SD (.67). We suggest that these differences cannot account for disparities between the groups and that although level of disability and level of selfdetermination were related, this relation was only one factor among several to consider. In future research on self-determination, it will be important to control for the effects of other factors, such as the environment, on the level of disability.

The definitional framework for self-determination that is provided in this paper identifies some component elements that can serve as the basis for student- and individualdirected interventions. There are a number of existing instructional materials that target such areas (Foxx & Bittle, 1989; Hoffman & Field, 1995; Martin & Marshall, 1995, Wehmeyer, 1995; Wehmeyer, Martin, & Sands, in press). It is equally important, however, to focus attention on more than just teaching specific skills to individuals with mental retardation. If interventions to promote self-determination are to succeed, we must also alter the environments within which people with mental retardation live, work, and play to allow greater choice and control and examine the attitudes of service providers, educators, families and others who interact with them.

The need to focus on selfdetermination seems particularly acute for people with mental retardation because they appear to have relatively few opportunities to make choices and decisions and assume control in their lives (Wehmeyer & Metzler, 1995). It will be up to professionals to assist individuals with mental retardation in learning to trust judgment and decision-making their abilities. Another task will be to provide these individuals with the additional requisite skills and abilities they need to exert control in their lives and to be selfdetermined. We hope that the definitional framework described here will provide an impetus for further research on selfdetermination, with the ultimate goal of improving the quality of life of individuals with mental retardation.

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