

Predictors of Success in Individuals with Learning Disabilities: A Qualitative Analysis of a 20-Year Longitudinal Study

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The research described here is part of a larger longitudinal project tracing the lives of a group of individuals with learning disabilities who attended the Frostig Center more than 20 years ago. The purpose of the larger project has been to identify variables that predict successful outcomes for adults with learning disabilities. This article focuses on the qualitative findings obtained using an ethnographic approach to analyzing in-depth interviews with participants. Six previously identified “success attributes” (self-awareness, proactivity, perseverance, appropriate goal setting, effective use of social support systems, and emotional stability/emotional coping strategies) were further defined. Using qualitative analysis, significant components of the success attributes that differentiated the successful from unsuccessful groups were identified, and changes over time were revealed. In addition, the following new themes were identified: (1) the learning disability exerted a critical influence across the entire lifespan; (2) there were differences in participants’ family functioning; and (3) there were differences in participants’ social relationships. Support for the salience of the success attributes and the additional themes to the participants is given in the form of direct quotations from the corpus of interview transcripts. Qualitative methodologies are stressed throughout the study for the purpose of obtaining an “insider’s view” of LD.

Over the last three decades, a number of studies have focused on adult outcomes of persons with learning disabilities (LD) (e.g., Fafard & Haubrich, 1981; Fink, 1998; Gerber, Ginsberg, & Reiff, 1992; Gottesman, 1978, 1979; Hellen-doorn & Ruijsenaars, 1998; Major-Kingsley, 1982; Rogan & Hartman, 1976, 1990). The majority of these studies report descriptive data on educational attainment, academic achievement, cognitive development, psychological health, social relationships, marital status, independent living, and employment status. Although the results of these investigations may help us understand the consequences of having an LD, they provide little information about the relationship between specific outcomes and their antecedent variables. Yet, if we are to develop intervention programs that can lead to positive life outcomes for individuals growing into adulthood with LD, we must be able to identify these factors that affect or are predictive of specific outcomes. Unfortunately, few longitudinal studies in this area provide such answers (McKinney, 1994).

Indeed, only a limited number of studies have used longitudinal designs and employed statistical techniques to identify variables that are predictive of specific LD adult outcomes (i.e., Raskind, Goldberg, Higgins, & Herman, 1999; Werner, 1993). Drawing from her seminal Kauai longitudinal study on resilience in at-risk children (Werner, Bierman, & French, 1971; Werner & Smith, 1977, 1989, 1992), Werner (1993) identified a number of “protective factors” that promoted

successful adult adaptation in persons with LD. Similarly, Raskind et al. (1999), in their longitudinal study of children identified as LD, isolated a number of attributes predictive of “success.” Although furthering our understanding, mere identification of the antecedent variables that lead to positive adult outcomes does not explain how these variables develop, affect, or are manifested in persons with LD over time. Perhaps most significantly, we do not come to understand the nature of these important variables from the perspective of those living with LD. Thus, a purely quantitative analysis enables us to know only that certain variables *can* predict certain outcomes, but it tells us little about *how* these variables shape an individual’s life course.

A qualitative approach to research, on the other hand, can provide a richer understanding of the characteristics, attributes, qualities, and environmental factors that affect the life outcomes of persons with LD. As Dabbs suggests, “Quality is the essential character or nature of something; quantity is the amount” (1982, p. 13). Qualitative analysis can help us understand the meaning of a particular entity, characteristic, or phenomenon within a particular context, rather than simply measuring how much of it is present (Bos & Richardson, 1994).

At the heart of qualitative methodology lies the ethnographic interview (Spradley, 1979). The ethnographic interview is designed to elicit responses from members of a given culture that reflect the “emic,” or insider’s perspective. That is, the researcher’s role is to learn from people, rather than simply studying them (Spradley, 1980). As a result, a concerted effort is made to eradicate preconceived notions about the informant’s motivations, actions, thoughts, and feelings. The

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researcher must recognize and set aside personal perspectives and bias, while actively listening to, recording, analyzing, and reporting the informant's¹ life story from the "inside out." In regard to research with adults with LD, Gerber and Reiff have long recognized the importance of the ethnographic methodology and eliciting the insider's perspective. As they so eloquently state: "Rather than try to take the words out of their mouths by substituting our own, it seems inherently more sensible to respond to the meaning that is already present in their stories, individually and collectively" (1991, p. 137). In a similar vein, in their 1992 study, Gerber, Ginsberg, and Reiff used this methodology to discover factors that promote vocational success in adults.

Werner and Smith (1977, 1989, 1992) appear to have been aware of the limitations of purely quantitative methods; they augmented their quantitative analyses with considerable qualitative data. For example, rich descriptions are provided of the protective factors that had been identified through statistical analysis. These descriptions deepen our understanding of the "forces" that affect informants' lives and lead to specific life outcomes. Furthermore, Werner and Smith's (1989, 1992) extensive direct quotes from participants paint an integrated and vivid picture of these protective factors in the insiders' own words. As a result, in addition to learning that specific factors affect life outcomes, the reader comes to understand how those factors are operationalized and manifested within the informant's life. Finally, the inclusion of qualitative information serves to support and validate the data derived from the quantitative analysis (Bos & Richardson, 1994).²

Using qualitative methodology, Gerber, Ginsberg, and Reiff (1992) and Werner (1993) were able to identify a set of factors that promote successful adult outcomes. The present inquiry is in a position to extend their findings in the following ways. First, the Gerber, Ginsberg, and Reiff study was conducted on a population of adults judged "highly successful" based on employment status, who were compared to "moderately successful" participants. The present investigation contained a greater range of participants, including unsuccessful ones, to whom findings might be generalized. The current study also used a broader definition of life success, which included life satisfaction, educational attainment, independent living status, family and social relations, psychological and physical health, and crime/substance abuse, in addition to employment status, so that generalization might be made to these additional realms. Finally, the Werner et al. investigation was conducted on a subset of persons with learning disabilities who were part of a total birth cohort of individuals living on the island of Kauai, a predominantly rural setting. Participants in the current study were from urban and suburban areas, where most LD populations typically find themselves and to whom generalization of findings might be justified.

Although our earlier quantitative analyses (Raskind et al., 1999) contributed to our understanding of the variables predictive of positive life outcomes for persons with LD, the quantitative analyses alone do not provide a deep analysis of how these attributes shape the life course from the "insider's perspective." Recognizing this limitation, the current article is intended to move beyond the quantitative identification of success attributes reported by Raskind et al. (1999) by presenting a qualitative analysis derived from the transcribed

interviews with participants in the Raskind et al. study. The purpose of this qualitative analysis is five-fold.

1. To explore ways the qualitative data support and/or validate the quantitative data.
2. To gain a richer and deeper understanding of the success attributes from the participants' perspective.
3. To identify specific components of the success attributes and their importance in discriminating between the successful and unsuccessful groups.
4. To reveal changes over time of a qualitative nature from Year 10 to Year 20.
5. To discover themes other than the success attributes that show commonalities among the informants.

HISTORY AND BACKGROUND OF THE STUDY

The research described in this article is part of an ongoing longitudinal project conducted by the Frostig Center in Pasadena, California. The project has traced the lives of a group of individuals who were identified as "learning disabled" in childhood and attended the Center between 1968 and 1975. In 1992, Spekman, Goldberg, and Herman reported the results of a 10-year follow-up study that focused on identifying the internal factors and external events in the lives of young adults with LD that could discriminate between those who were successful and those who were not. Participants were identified as "successful" or "unsuccessful" using a multidimensional definition of success, which included eight domains: employment, education, independence, family relations, social relationships, crime/substance abuse, life satisfaction, and psychological health. The quantitative analysis revealed few meaningful, significant differences between the successful and unsuccessful groups based on background variables, cognitive measures, or academic achievement. It appeared that success might be related to other factors in the lives of these individuals. In this regard, qualitative analysis proved more fruitful in revealing a set of "success attributes" that differentiated the groups, with the successful group illustrating greater self-awareness/self-acceptance of the learning disability, proactivity, perseverance, emotional stability, appropriate goal setting, and the presence and use of effective social support systems. Further exploration of these attributes became a key goal at Year 20.

While the 10-year follow-up provided useful information about the early adulthood of persons with LD, it also gave birth to a number of additional questions regarding the nature of LD across time and the various factors related to positive life outcomes. These additional questions were investigated in a 20-year follow-up study, the quantitative results of which were reported by Raskind et al. (1999). Using a multidimensional view of success as in the 10-year study, participants were rated either successful ($n = 21$) or unsuccessful ($n = 20$) (see Raskind et al., 1999 for an in-depth discussion of the rating process). Overall success ratings were based on judgments while taking into consideration outcomes concerning the eight domains used in the 10-year follow-up. All available information was reviewed, including background information, current testing data, public records, relatives and

other contacts, informant contacts, and, most importantly, transcripts of the two- to six-hour interviews with participants. After reviewing this information, a vote was taken on perceived overall success. Interrater reliability was 0.97 on overall success. Only six participants had switched categories since the 10-year follow-up; three went from successful to unsuccessful, three in the opposite direction.

Initial quantitative analysis revealed no significant differences in background variables between the successful and unsuccessful groups (age, gender, family SES, ethnicity, birth order, number of siblings, IQ, diagnostic category, or services received at Frostig), nor were there significant differences on measures of life stressors between the groups at the 20-year follow-up. There were, however, significant differences in outcome measures of success, as one would expect. For example, employment ratios were 17/21 for successful individuals, whereas unsuccessfuls had a ratio of 4/20. The mean highest grade achieved for successfuls was 15.1 years, while unsuccessfuls averaged 12.7 years. Academic skills also differed, with successfuls' reading scores two grade levels above unsuccessfuls', and math one and one-half grade levels above. Eighteen of the 21 successful participants were living independently from their parents, whereas only half the unsuccessfuls had reached independent status.³

The major goal of the 20-year study was to discover whether the presence or absence of the previously identified personal behavior patterns, referred to earlier as the "success attributes," might emerge as powerful independent variables explaining these differences in outcomes. To quantify the attributes, each was operationalized into characteristic behaviors or expressions of attitudes. For example, Proactivity versus Reactivity was operationalized as follows:

<i>Proactivity</i>	<i>Reactivity</i>
Participant makes decisions	Participant responds to events rather than planning ahead
Is actively engaged in the world, participates economically, socially in family and community	Responds with passivity and avoidance to negative events
Expresses belief that he/she has the power to make positive changes in his/her life	Does not acknowledge that situations can be altered or multiple solutions to a difficulty might exist

The direct quote, "I would go to a professor early in the semester and negotiate on the accommodations I would need," was taken as evidence that the participant possessed the attribute of proactivity (expresses belief that he or she can change events as opposed to not acknowledging that situations can be altered). Each participant's interview transcript was examined by the four researchers for evidence of the operationalized behaviors. The transcripts were then independently scored by each researcher for the operationalized behaviors/attitudes of each of the six attributes and a total calculated for each attribute. Interrater reliability for the total scores was 0.96.

Although background variables did not differentiate successful and unsuccessful participants, the presence or absence

TABLE 1
Percentage of Successful Behaviors Practiced by Successful and Unsuccessful Groups

<i>Success Attribute</i>	<i>Successful</i>	<i>Unsuccessful</i>
Self-awareness	93%	11%
Proactivity	93%	22%
Perseverance	93%	22%
Emotional stability	64%	22%
Appropriate goal setting	93%	22%
Use of social support	93%	78%

of the attributes differed dramatically between the groups, as is shown in Table 1.

Once the attributes had been quantified, their influence could be determined in relation to other variables. Data reduction techniques included correlation matrix analysis and factor analysis. Three variables emerged as potentially influential from these analyses: (1) a composite score on the success attributes; (2) IQ; and (3) academic achievement. First, a discriminant analysis revealed that a composite score on the six attributes best discriminated successful from unsuccessful participants ($p < 0.000+$). Additionally, stepwise multiple regression analysis using a ranking of participants on objective measures of success such as years of employment, education level, number of community involvements, years of independent living, and so forth, supported these findings, showing that the success attributes alone explained 49 percent of the variance between the groups, with IQ contributing another 5 percent.

GOALS OF THE PRESENT STUDY

The isolation and quantification of the success attributes provided valuable information on how powerful the success attributes were in affecting life outcomes in comparison with other factors. Therefore, the researchers were anxious to develop a deeper and richer understanding of these success attributes through a qualitative analysis that focused on the insider's perspective. Employing qualitative methodology would also allow the researchers to identify and elucidate additional themes, commonalities, and shared beliefs.

Qualitative and quantitative research differ along many dimensions (Stainback & Stainback, 1988). The purpose of quantitative research is to discover cause and effect relationships in order to *predict* behavior, while qualitative research seeks *understanding* of interpretations and perceptions. Quantitative researchers view the reality they study as stable; the phenomena studied are facts that do not change (without cause). Qualitative research, on the other hand, studies phenomena such as interpretations and perceptions, which are dynamic and expected to change over time. Quantitative research studies phenomena from the point of view of an outsider, while the qualitative viewpoint is that of the insider. Quantitative research seeks to *verify* preconceived hypotheses, while qualitative seeks to *discover* theories and hypotheses that emerge from the data. Quantitative research is conducted under controlled conditions; qualitative is conducted in naturalistic settings. Finally, with quantitative research,

results are credible if reliable and replicable, whereas qualitative results are credible if they are valid, that is, if they describe in realistic and rich detail what they set out to study (Stainback & Stainback, 1988, pp. 8–9).

In sum, in the present study, qualitative methodology was used to (1) discover ways in which qualitative findings support and validate the earlier quantitative findings; (2) gain a richer understanding of the success attributes; (3) identify the components of each success attribute that discriminate successful from unsuccessful groups; (4) discover themes other than the success attributes; and (5) identify changes over time of a qualitative nature between Years 10 to 20.

METHOD

The methodology described below builds upon previously described general research procedures and quantitative results. For further details on these research methods and quantitative analyses, the reader is referred to Raskind et al. (1999).

Participants

Efforts to locate the 50 informants who participated in the 10-year follow-up netted 47 informants, only three of whom declined to participate further; another three did not respond to repeated written and telephonic communications. Hence, 41 informants (82 percent) participated in the 20-year follow-up.

Of the 41 participants, 14 were female and 27 were male. The participants' mean age was 32.1 years, with a range from 28 to 35 years. The sample was 88 percent Caucasian, 10 percent Hispanic, and 2 percent African American. The socioeconomic status (SES) of the family of origin was: upper-upper class—29 percent; upper class—15 percent; upper-middle class—29 percent; middle class—12 percent; upper-lower class—10 percent; and lower class—5 percent. The mean verbal IQ at entry to the Frostig Center was 98; performance IQ was 94; and full-scale IQ was 96. The average length of attendance at Frostig was 37 months ($SD = 18.29$).

Chi-square tests revealed that the 41 informants did not differ significantly on ethnicity, gender, or SES characteristics from the original pool of 206 students at the Frostig Center from which they were chosen. Mean full-scale IQ at time of entry to the Frostig Center also did not differ, nor did informants in the present follow-up differ in terms of the presence or absence of any particular diagnostic category, or total number of diagnosed difficulties.

Procedures

Extensive, direct interviews were conducted with the 41 participants, lasting from two to six hours. Interviews were conducted in five states across the United States. They were conducted by a research team composed of an anthropological linguist, a developmental psychologist, a specialist in LD, and a clinical psychologist. Each had been working in the LD field for more than 15 years. Specific questions focused on educational history, employment history, residence history, family

relations, community relations, physical health, psychological health, recreation, financial status, criminal contacts, drug and alcohol use, and a wide range of personal/psychological attitudes and behaviors.

Databases were established for quantitative data, such as test scores, yearly income, and so forth, and transcripts were prepared of the interviews. Other data utilized included current achievement and IQ testing scores, additional cumulative file information, life stressor checklists, researchers' current ratings of participants' success, and researchers' ratings on the presence or absence of six success attributes. Finally, for comparison and verification of information, public sources were consulted, such as voter registration and criminal and civil court records.

The raw data for the current article have been taken primarily from transcripts of individual interviews conducted during the 20-year follow-up, when participants were in their early 30s. To develop the interview protocol, the researchers began with the 10-year follow-up interview questionnaire that had been used to formulate clinical summaries. Over several months, they met to revise and refine questions, and to formulate new ones that arose out of previous analyses or reflected current research interests in the field of LD. Interview questions were designed to collect descriptive data, as well as elucidate the success attributes.

During the development of the protocol questionnaire, constant contact was maintained with children and adolescents with LD currently at the Frostig Center. In addition, all the researchers had developed many relationships, both professional and personal, with other adults with LD. Questions and research strategies were continuously refined and elaborated according to feedback elicited from these persons with learning disabilities. Consequently, the researchers' cumulative involvement with the LD community was wide, rich, and historical, as well as current, reaching far beyond the original 50 participants in the study.

Data Analysis

While interviewing participants, the research team conferred on a weekly basis to refine interview techniques, strategies, and study questions, as well as to develop tentative trends, commonalities, and themes. Upon completion of the interviews, the tapes were transcribed and distributed to research team members. Weekly meetings were held to begin formal analysis of the transcripts and protocols. Typically, on the first discussion of a transcript, the researcher who had interviewed the participant would briefly describe the physical conditions of the interview (e.g., where it had taken place, distractions, etc.) and any difficulties that arose in conducting the interview. Cycles of data analysis were then repeated as follows: (1) team members read the transcripts; (2) team meetings and marathon meetings were held to summarize data, brainstorm themes, discuss relationships between themes, and reach consensus; and (3) finally, verification was sought through contacts with the original informants and other persons with LD in the researchers' networks.

A total of three research cycles took place. The first was conducted to verify themes generated from the 10-year

follow-up and to generate new themes; the second to verify the validity of the operationalized behaviors corresponding to each success attribute and to explore relationships among success attributes; and the third cycle was conducted to select specific evidence in the form of quotations for each of the themes and success attributes identified in the quantitative analysis. The quotations were selected to be representative of the shared knowledge and experiences of our informants, verified by multiple members of the LD community.

The emphasis in our presentation of the qualitative results is on comparing the experiences of successful and unsuccessful informants in order to capture more explicitly the essence of each success attribute and how it relates to a successful adult life for our informants. Quotes from the successful and unsuccessful study participants are used to elucidate each attribute and to provide a first-hand account of how attributes were expressed in informants' own words.

It is important to emphasize that not every successful individual displayed every success attribute, and that some attributes were evident to greater or lesser degree. Similarly, some unsuccessful participants showed some of the success attributes. However, successful individuals displayed these attributes to a greater extent (at a statistically significant level) than the unsuccessful participants. In the following discussion, we will focus on reporting the perspective of successful individuals with reference to the experiences of unsuccessful individuals for contrast only.

RESULTS

Success Attributes

The following section reports the new information about the success attributes identified by Raskind et al. (1999) (self-awareness, proactivity, perseverance, appropriate goal setting, effective use of social support systems, and emotional stability/emotional coping strategies) gained from the current qualitative analysis, including a description of how the informants perceived the attributes as contributing to their own success.

Self-Awareness

Initially, the authors thought only successful individuals would refer to themselves as "learning disabled." However, both groups were open about their learning difficulties and described life experiences in terms of their LD.

As I said, I have dyslexia. I have never not had dyslexia. So it has always, and always will affect my life. I don't know what it's like not to have dyslexia. I don't know that I want to do life over again without it. It's part of me. It will hinder me, as it has, and it will push me into places where I never would have gone.

More specifically, both groups were clear about the types of problems they had as children and differentiated problems similarly as to (1) academic problems, (2) academic-related problems such as attentional or organizational difficulties,

and (3) nonacademic difficulties such as motor deficits or emotional/behavioral problems. "I wasn't a behavior problem, I didn't have attention problems. "But Jes[us] . . . I just couldn't learn to read and write."

The one component of self-awareness that discriminated the successful from the unsuccessful participants was the ability to *compartmentalize* their disability. That is, successfuls were able to see their learning difficulties as only one aspect of themselves. Although they were well aware of their learning limitations, they were not overly defined by them. As one successful informant told us:

You know, everybody comes with a package. And yeah, there are things that I am good at, and things that I am not so good at. Some of my limitations are reading and writing. But boy, when it comes to putting things together, and understanding how things go together, reading plans, I'm really good at reading plans. I'm really good at chasing down problems. I'm a good diagnoser . . . so those are some talents, some skills that I was born with . . . I carved a different path and my whole life has been that way.

Clearly, this individual differentiated his LD from his abilities in other areas, namely, "putting things together," which enabled him to contain the effect of the LD and prevent it from negatively affecting his sense of self and well-being. That is, his disability was reduced to a small piece of who he was and how he defined himself. Eventually, successful informants reach a level of recognition of their talents along with an acceptance of their limitations. This idea is expressed by one participant who stressed:

It's still there and I compensate . . . I think the problems that I had were no different than anybody else who is conscious of their weaknesses, and then some of their strengths. Some people are not conscious at all.

The ultimate expression of this kind of self-awareness was the ability of many successful participants to find compatible and appropriate employment and/or social milieus in adulthood, which we have termed "niche-picking." For example, one successful niche-picker capitalized on her self-awareness of interpersonal strengths and communication skills to choose a career in mental health counseling. In contrast, a number of unsuccessful participants were very poor niche-pickers. Some repeatedly chose, and failed at, career situations that accentuated their area of disability; others appeared unable to find a niche due to the global nature of their disabilities, which influenced their success across multiple contexts.

Proactivity

Successful individuals with LD were engaged in the world around them, politically, economically, and socially. They participated in community activities, and took an active role in their families, neighborhoods, and friendship groups. Furthermore, successfuls reported taking leadership at work and in social contexts. In addition, a few successful participants demonstrated exceptional social networking for the purposes

of supporting their career and employment opportunities. Most successfuls demonstrated the ability to *reciprocate* by adopting a care-taking role with family members or acting as mentors in various settings. Finally, successfuls frequently were involved with their neighborhood and communities through membership in voluntary social organizations (i.e., churches, clubs, etc.), whereas unsuccessful participants rarely had such involvements.

The successfuls believed that they had the power to control their own destiny and affect the outcome of their lives. This clearly differentiated them from their unsuccessful peers. As one successful individual stated:

I actually didn't take classes as much as I took professors. The way I got through college was I looked at the classes I was interested in and I was over at the professor's office just telling them my story and this is what I need. I'm going to need extra time, give me the ability to take the written exam, and take it back and there are a bunch of exceptions and I just listed them out for these people.

In contrast, unsuccessfuls were passive and tended to merely respond to events.

A critical element of proactivity was the successfuls' ability to make decisions, assuming full responsibility for the outcome. In talking about how his shyness interfered with initiating a social contact, another informant shared:

I looked at that lesson and said, "OK, you blew it that time. What are you going to do? How are you going to overcome that situation?" So I systematically started working on getting over my shyness And last spring . . ."

Commenting on his career, another individual expressed:

I think that I worked hard and I made choices instead of letting things happen. I mean stuff that I haven't actively gone and taken care of are the only things that I'm not as satisfied with.

Another difference between successful and unsuccessful respondents was that the former often consulted others while making decisions. One informant consulted friends and family concerning a career change, eventually following her sister's advice to pursue her strength in fashion design. Finally, unlike their unsuccessful peers, successful individuals were flexible when considering and weighing options. For example, when a successful informant who was an athlete was faced with a career-ending knee surgery, she was able to smoothly shift her career focus to a pottery business. Another successful individual, when faced with required courses he could not pass because of his LD, researched and transferred to a university that didn't require these courses for graduation.

In contrast, the unsuccessful group was unable to envision how difficulties might be side-stepped, or that several possible solutions might exist. Instead, they either showed passivity by making no decision or, conversely, rigidity by sticking to a simplistic rule-based and ultimately ineffectual decision. For instance, one unsuccessful informant continued to apply for secretarial jobs despite her severe reading and spelling disabilities. She did not seem to understand why

she was not being hired. Unfortunately, she developed a resentment toward potential employers, which in turn affected her interview skills negatively. She continued to externalize blame onto the employers and eventually stopped interviewing altogether.

Perseverance

Many study participants, both successfuls and unsuccessfuls, reportedly kept going despite adversity. They described themselves in perseverant terms such as "*I am not a quitter,*" and "*I never give up.*" With poignancy, one adult stressed: "*Only the strong survive. I've been through [so] much crap, and I still kept on going.*" Successfuls demonstrated an additional ability—to know when to quit. They showed flexibility in making decisions to pursue other avenues of action in response to failure. Although they rarely gave up on a general goal, the means of achieving it often shifted, improving their chances for success. As one adult stated: "*Once I have a failure I can't just dwell on that failure and [let it] restrict me the rest of my life. I'll do something else.*"

Successful participants demonstrated a variety of strategies that allowed them to persevere. They often found a way around the obstacle to their progress. Some employed a "spray" approach, in which they simultaneously tried a number of strategies until one worked. This was particularly evident in the group's approach to college. Successful participants often made several starts at college, changed universities to find accommodating programs for their particular needs, changed majors, and accepted help from others on campus.

In contrast, unsuccessfuls were not so flexible and often appeared to be "beating their heads against the wall," perseverating rather than persevering. One participant, for example, clung to one college setting for 11 years as a communications major, even though her education could never lead to a job in that field since she was a social isolate with highly restricted expressive language.

Beyond simply not giving up, successful participants indicated that they actually learned from their hardships. "*I have failed many times, but I am not a failure. I have learned to succeed from my failures.*" Another study participant said:

In school they don't teach students that every successful person had a number of failures. If you really think about it, every successful person has had failure. What sets apart a successful person from a professional failure is, a professional failure allows himself to be defeated and becomes defeated and you see them out on the streets. A successful person looks at failure as a means to an end.

Furthermore, successful informants agreed that difficult situations were often necessary for learning to take place.

Many of the successful individuals internalized their ability to persevere as an important area of strength. Some even elevated it to the status of a "special talent" about which they felt great pride. Although successful informants reported a variety of factors that motivated and maintained their perseverance, all stressed its importance in their lives. A successful informant stated it clearly when he said:

I am most proud of my ability to keep going. I have learned to keep going no matter what people said. No matter if it was inspired by anger or revenge or whatever, still it's the ability to keep plodding along.

In comparison, unsuccessful informants often quit in the face of adversity and backed away from challenges. Even though they described themselves as perseverant, their detailed descriptions of incidents revealed they had given up much more easily and quickly than their successful peers.

Goal Setting

Both successful and unsuccessful informants referred to goal setting, but the way the two groups approached their goals differed substantially. Successful participants had set goals in the past, and continued to do so into the present. Goals of successful individuals also appeared to be specific, yet flexible, so that they could take advantage of opportunity. Their goals covered multiple domains, including education, employment, family, spiritual, and personal development. Regarding current goals, one successful participant stated:

We'd like to have children before my wife is 30. So we've got two years left there. I'd also like to see a change in my career soon. I'm not exactly sure what I want to do. I have a plan if I want to become a teacher. I have a plan if I want to be an engineer.

Included in the goals of successful informants was a strategy to reach their stated goals in concrete steps. One successful adult pursuing a career in the entertainment field stated:

I always look at every move, like this particular move doing the video, as a stepping stone for the next project. That's how I'm looking at it. As I said, the area I really want to move into is, I want to direct.

Adults in the successful group stated goals that appeared concrete, realistic, and attainable.

I'll tell you something. I'm very realistic in terms of what I know I can do, what I possibly can do, and what I cannot do. That's why I knew right off the bat that I was not going to be a doctor.

Finally, many successful adults indicated that career goals had been identified for them in early adolescence, and that this had provided direction and meaning to their lives. A successful adult trained as a social worker reported:

When I was in late high school, I knew what I wanted to do when I grew up. I was given the opportunity to babysit and in the twelfth grade I worked at a day camp. I just discovered that I was interested in children and that this may turn out to be a profession. So there was kind of a break and something to shoot for; some sort of self-direction.

In comparison, the goals of unsuccessful participants showed little planning, lacked specificity, reflected little

recognition of the need for flexibility, failed to demonstrate an appreciation for the steps involved in attaining a goal, and did not make reference to early identification of career intentions or direction. As a result, their goals were often vague, unrealistic, or grandiose. Examples included a goal to "become vice president of a company, any company" by a 35-year-old informant with difficulty holding even entry-level jobs and no management experience, and to "learn to type and become a high-paid secretary" by a woman with severe impairment in written language.

Presence and Use of Effective Social Support Systems

All study participants spontaneously referred to the assistance they had received from others over the course of their lives. They frequently spoke about the support, guidance, and encouragement provided by "significant others," such as friends, teachers, therapists, co-workers, and family members. Some informants considered these significant others as mentors. One adult female spoke of the constant encouragement her father had given her:

He really was my greatest champion dealing with school and he really worked hardest to get me into school and for that I give him a lot of credit.

A participant with a long, successful employment history in fashion merchandizing spoke about receiving early career guidance from her older sister:

I was really depressed, and I was talking to my sister and I was just crying. "What am I going to do?" I had tried advertising and it wasn't working and I had tried the magazine and it didn't work. She said, "You've always been drawn to clothes and fashion and you read this and you read that, and people come over and you put them together and you know that kind of thing . . . Why don't you go check out some classes at the Fashion Institute" . . . And I did it and I just loved it.

Another reflected on the important relationship she had with an effective educational therapist in her early teen years:

They sent me to an educational therapist. And she worked with me on visualization and memorization and I think that's helped me probably the most. She taught me how to picture something in my head and keep it there, like a word. That's something that I still do now.

Finally, a spouse was readily credited for a male informant's success: "My wife: she's great. I couldn't do it without her by any means."

There were substantial changes in the nature of support systems as study participants moved from early adulthood at the 10-year follow-up to middle adulthood at the time of the 20-year study. In early adulthood, our informants described the role of mentors and significant others as trusted guides who gave them support, encouragement, and, often, concrete financial, educational, and emotional help. In adulthood, at the 20-year follow-up, the relationship between successful

informants and “significant others” began to change. These individuals were now described as influential people from the past who had helped shape their lives. In addition, successfuls demonstrated the ability to reciprocate in personal relationships with mentors and significant others. For example, this informant explained:

As far as work goes, when I first started working at this company, there was another co-worker who was a senior technician and I started out as an associate technician, which is like a junior tech, but I got promoted since then. He was really helpful to me and showed me a lot of stuff, so I did have a lot of help to start off with. Of course, since then he left the company. And since then, I've been thriving on my own. In fact, a lot of people come up to me for help now.

Some successfuls had even switched roles with family members as they found themselves taking care of aging parents, siblings, or assuming responsibility for family-of-origin financial and business matters.

In contrast, at the 20-year follow-up, unsuccessful participants in the study continued to describe mentors and significant others as caretakers upon whom they still remained highly dependent. One male informant described his continued dependency on family:

My parents built a guesthouse for me. They built a mother-in-law addition to their house. I live in their guesthouse on their property. Basically I keep it clean but that's about it. My car insurance is paid for by my parents. They buy the food.

Another unsuccessful participant described a financial and behavioral monitor:

For about three years I was involved in counseling at _____. Not now. I see Pete two hours a week for financial and money and personal management . . . in case some things may flare up again.

In addition, the parents of one unsuccessful female maintained complete financial and personal control over her life. In some of these extreme cases, these care-taking individuals appear to be alternatives to institutional care.

A key distinction between the successful and the unsuccessful groups was that successful participants had significant others who held clear and realistic expectations of them, and who were consistent and steadfast in their function as sounding boards for reality testing. While never harsh or critical, they guided successful participants in identifying and achieving realistic goals, or changing directions if necessary. A successful adult described this process well when he reported that a mentor in the workplace helped him “switch gears” into a job that was better suited to his skills:

I guess you could say he rescued me. I was working at this place and going nowhere. Probably getting canned and I only had a couple of more months of work and he was able to take me out of the division I was in and put me back working on minicomputers. That made me very happy. He taught me a new programming language to work in and really helped me out. He's one of the reasons I own this place.

Finally, persons in the successful group more often actively sought support than persons in the unsuccessful group, and they were willing to accept support when it was offered. One former student shared the following college experience:

It was midterms. I wasn't getting C's, I was getting D's and F's. I looked like I was going to have to drop out. If I was going to drop out, that . . . would have been the end of the world for me. That was a real difficult year. I made a recovery. Systematically, I talked to my teachers, I talked to friends, and they helped me through that very difficult situation.

Another successful participant shared an effective academic support strategy:

Whenever I have to write something . . . it's been this way since day one . . . I take it to someone like my girlfriend or my mother and they can always clean it up and make it look loads better.

*Emotional Stability/Emotional Coping Strategies*⁴

All participants reported that growing up with an LD had created significant stress in their lives. They struggled constantly, sometimes more or less successfully. One highly successful informant described the ubiquitous presence of her LD in elementary school, which spilled over to create tension at home:

In childhood, I think that the critical events of my life had a lot to do with my learning disability. I carried a lot of stress about that. It was an impact because it was always there. I felt like a normal child, but it was always there. So every day of your life you have to sit down and do your homework and there was “didn't you listen in school? Don't you have an example? Didn't the teacher tell you how to do it? . . .” and then there would be tears because you can't take it from school to home in your mind. There's tears and there's family conversation and there's tension.

Another adult describes the fatigue his LD stress caused in college:

I think the real reason I went straight into construction after college is I was really worn out . . . it does take a lot more time and energy for me to learn when it's all based on reading and writing than it does for other people so I was really tired when I got out of college. I needed to rest my cognitive stuff and work with my hands.

Even successful participants reported that stress resulted in psychological difficulties (i.e., feelings of depression, panic attacks, anxiety).

When I was a junior in college, I don't know if you are familiar with panic attacks, like an anxiety. It was so terrible I couldn't even sit through a final once. I went to see a counselor for a year. She was at Berkeley and I still wish she was down here. I saw her for about a year. I've been in and out of counseling since I was I don't know.

The significant difference between the two groups appeared to be that the successfuls developed effective means of reducing and coping with stress, frustration, and emotional problems. To deal with LD stress, they recognized what situations triggered stress and developed effective strategies to cope with stress. The informant above managed her panic attacks by recognizing situations that triggered the problems. Her coping strategy was to seek assistance from an MD who could prescribe medication and a therapist who could work with her to reduce the impact the attacks had on her general functioning as a successful young adult.

Successful study participants referred to numerous other methods for reducing stress and coping with frustration and emotional problems, including getting others to do unmanageable tasks on the job, holding in their emotions so adverse consequences would not result, changing activities periodically so stress did not build up, utilizing peer support and encouragement, planning ahead for difficult situations, keeping away from negative or critical persons, obtaining medication, working out differences with friends and family, sharing with sympathetic family members, and so on.

Recognizing triggers and developing effective strategies for dealing with them aided successful participants. In contrast, unsuccessfuls reported being “blindsided” by emotional states, which then overwhelmed them. When overly stressed or emotionally wrought, they had great difficulty thinking of potential resources, both internally and externally, to help them reduce stress and regain stability. For instance, one study participant described isolating himself in response to feelings of depression:

But I'll also let you know that during this period of time that I was in school, I was very depressed . . . I just hibernated in that room and I didn't leave that room. I'd go out and get in my car and turn the engine off about halfway down the street. Then I went back in that room and they didn't even hear me come in.

Maintaining good peer relationships and keeping socially active were two effective coping mechanisms that most clearly differentiated the successful from the unsuccessful group (also see sections on Proactivity and Social Support Systems). One successful informant reported:

Well they're companionship. They're somebody I can share my frustrations with. Like if I'm ever insecure about something you can use them as a sounding board . . . get some validation or some, you know, constructive criticism. Which is always nice. Friends are so important. It just would be nice to have more.

In contrast, this unsuccessful informant reported a very different picture of friendships:

I had no social life in high school or college. Lisa was my first girlfriend. I've had women I've known but not any kind of girlfriend . . . There were 3 or 4 guys I hung out with, but no permanency.

Summary of Success Attributes

In summary, successful informants demonstrated an enhanced self-awareness and the ability to compartmentalize their LD that allowed them to acknowledge strengths as well as weaknesses. They were engaged in the world financially as well as socially, often rising to leadership roles in the family, at work, and in the community. They were decisive, often consulting others for information or advice, and they took responsibility for outcomes. They showed persistence in their pursuits, yet they could be flexible in altering the path by which they skirted obstacles. Successful informants set realistic goals for themselves and demonstrated an awareness of the steps that would be required for their attainment. They made use of the social support available to them in reaching these goals and sought help when needed. In adulthood, they demonstrated the ability to reciprocate and provide care and support for others. Finally, they had developed strategies for recognizing and reducing stress in their lives. Many had developed strong and intimate peer and family relationships that assisted them in many ways to cope with stressful times and maintain emotional stability.

Themes in Addition to Success Attributes

Several commonalities arose from the qualitative analysis of the 20-year follow-up interviews that did not concern success attributes. These additional issues have been organized under three “themes”: LD across the lifespan, family differences, and social relationships. These themes were characterized by both successful and unsuccessful informants as “differences” in their life experience that related directly to having an LD, and that they believed they shared with others with LD.

LD Across the Lifespan

Most participants referred to particularly salient features of their life trajectories that were related to having an LD:

I will always think of myself as a child with a learning disability. That doesn't change, it is a part of my life forever. It affects you in different ways. You have the problems of the mental attitude about yourself and you have the physical problems of being able to read like everybody else does or being normal like everyone else is or considering yourself to be normal like everybody else is . . . but I can tell you it does have a long-term effect on your life, for the rest of your life.

More specifically, informants reported (1) the critical influence of LD in multiple contexts, (2) shifting patterns of impact, (3) the existence of stages of acceptance of their LD, and (4) a need for services across the lifespan.

Critical Influence of LD in Multiple Contexts. Beyond school experiences, informants reported that their LD had had a profound influence on their home life and relationships with family. Furthermore, the LD had a notable effect on peer relationships, on the development of special talents and interests, on later employment and career choices, and even on the types of recreational activities chosen over the years.

Stresses of Having an LD Decreasing Over Time. Participants experienced stress directly related to having an LD in many contexts, but especially in educational settings. There was a clear trend that the stress of having an LD decreased over time, as reported by this informant:

That stress thing . . . when you're a kid, yeah it's a thousand percent stressful because you are striving to learn something you didn't know before. And as an adolescent, yes. I had the training to teach me how to do it but it was still a major portion of my life. I was still trying to achieve in school. So it was still a major stress but not as major as when I was a little kid. Difference in attitude. And when I became an adult I just looked at myself totally differently. It was not any problem at all.

The overwhelming majority of study participants reported that the most difficult times were associated with their childhood. Specifically, they pointed to stress due to academic failure and frustration, self-doubt, fear of social humiliation, struggles with self-esteem and making friends, and being teased and bullied.

School was just impossible. I mean I couldn't even get through a day. It was socially and mentally just horrible. I just couldn't do it. And I think that my parents felt that I needed a place that was going to accommodate my needs and build up my confidence and teach me how to be in school. I think they were right. I think it helped.

Adolescence was a period when participants gained more control with regard to their education. They were able to pursue special interests and talents, which allowed for more experiences with success.

Prior to this time, study participants described frustration at not receiving encouragement to develop these talents, and that their special abilities were often the “losers” in the tradeoff between remediating weaknesses and developing strengths. Several informants mentioned the importance of special abilities or interests for enhancing a positive identity in this already difficult time of adolescence and as an “antidote” to the negative impact of their LD. Successful informants went on to say that, starting in adolescence, they prevailed not because they had remediated their LD, but because they had capitalized on a special ability or interest to help them achieve self-sufficiency.

[Whether LD influenced adolescence] *Well it got me out of school, you know, out of classroom stuff. The art got me into the specific areas in school where I was OK. Basically just funneled me down to a path where I was able to deal and able to function well. Not feel bad.*

Others reported finding specific academic, organizational, and/or technological strategies to help them compensate for their LD in adolescence.

I learned to write on a dictaphone . . . I couldn't really write stories yet because we were fighting the spelling . . . But once we skipped the spelling part of it, I was free to really work on paragraphs, making things make sense . . . learning what

a conclusion was, how to get your thoughts all together and lined up for a paper.

In adulthood, participants were better able to arrange their lives so they weren't constantly forced perform activities at which they were not particularly adept. By that stage, they had developed some of the success attributes, such as perseverance, that allowed them to compete successfully with their nondisabled peers. They employed more and varied compensatory strategies as they became available. However, our participants reminded us that new contexts, which can carry new expectations, can still require considerable adjustment, even in their current lives.

Stages of Acceptance of the LD. Participants described a major struggle with a process they termed “acceptance of the learning disability.” Many passed through similar stages working toward acceptance of the label of “learning disabled,” including: (1) *awareness of difference*; (2) *the labeling event*; (3) *acceptance/negotiation of the label*; (4) *compartmentalization*; and (e) *transformation*. The reader is referred to E. L. Higgins, Raskind, Goldberg, and Herman (2002) for a complete discussion of this subject.

Need for Services Across the Lifespan. Nearly all participants expressed the view that their LD would never be “outgrown” or disappear. As a result, many expressed specific unmet needs for services long after leaving educational settings. Frequently mentioned needs included assistance in job placement and transitioning to new positions and careers, intermittent psychological counseling, assistive technology, tutoring, referral services for a variety of social services such as housing, and help with peer relations. In addition, several mentioned wishing to find peer support groups where they might meet other persons with LD.

I don't have any enemies, but I don't have any friends. I date once in a while but I really don't have any friends. Do you know if there are any groups, where I might meet people like me? I get along with [my neighbors] but I don't really see much of anybody. I don't really relate to anybody.

Family Differences

Most participants in both groups referred to differences in their relationship with their families that had shaped the trajectory of their lives in various ways. Frequently mentioned topics included (1) exceptionally positive feelings toward family members, (2) extraordinary family support, (3) prolonged financial and functional dependence on the family of origin, and (4) stresses on particular family members due to the participant's LD.

Most informants were openly appreciative of their parents' and siblings' assistance over the years. They also expressed *positive feelings about family members*. In particular, they shared with the researchers their tremendous gratitude for the family support they received and for the adjustments spouses and children had made to help them compensate for their disabilities. Additional assistance by family was needed

to help many participants reach full independence, and accommodations were still being made for those who had not reached financial or functional independence. This *prolonged dependence on family of origin* was exemplified by a 35-year-old participant's father who was forced out of retirement because his daughter was unable to support herself or live independently.

Participants were also cognizant of the extra burden of *family stress as a result of having a person with LD in the family*. Often, extraordinary accommodations had been required of family members. Informants shared their appreciation for such sacrifices and were especially regretful of the undue stress they may have created as a result of earlier behavioral difficulties.

Social Relationships

Informants shared *social difficulties across several contexts*. Some reported a general shyness or difficulty trusting others in various contexts, such as work, recreation, or family settings. Many told us they did not know where and how to meet new people, or make or sustain friendships. Most reported late development of romantic relationships compared with their nondisabled peers. Finally, participants mentioned difficulties in personal or marital relationships as a result of dependence and/or lack of reciprocity. They frequently needed assistance with certain tasks, which tended to disrupt power relations. Many also indicated that they experienced reduced opportunities for reciprocating. On the job, some reported difficulty asserting themselves at work or getting along with co-workers.

DISCUSSION

The results of the qualitative analysis of the 20-year follow-up data validate the conclusions from the earlier quantitative analysis (Raskind et al., 1999) regarding the existence of the success attributes and their power in predicting specific outcomes for persons with LD. In addition, the compelling evidence provided by informants' direct quotes goes beyond the quantitative analysis to deepen our understanding of how the success attributes actually develop, direct, and affect the life outcomes of our informants.

The qualitative method has allowed us to paint a clearer picture of the meaning of each success attribute by identifying which components best discriminate between successful and unsuccessful individuals with learning disabilities. For example, the qualitative analysis confirmed that "compartmentalization" was the key component of the success attribute *self-awareness*. Successful informants demonstrated "flexibility," whereas unsuccessfuls did not as it concerns the attribute *perseverance*. The cornerstone of *proactivity* was anticipating difficulties in a variety of contexts and responding with positive action. As for *goal setting*, successful participants showed an appreciation for the step-by-step progression it takes to reach a goal and reported having developed realistic goals early on. As to *social support systems*, relationships with mentors/significant others became reciprocal for successful informants. *Emotional stability* was found to

be better described for the successful group as their ability to recognize triggers for stress and to develop effective coping strategies. The increased specificity the researchers were able to abstract from the interviews enhanced our understanding of the success attributes from the perspective of our participants.

Furthermore, the qualitative analysis revealed subtle changes over time from Year 10 to Year 20 that would have been overlooked in a quantitative analysis. First, there was considerable stability from Year 10 to Year 20 in terms of overall success; only three successfuls became unsuccessful, and three unsuccessfuls became successful between Year 10 and Year 20. Similarly, the success attributes identified in the 10-year follow-up were also found to discriminate successful from unsuccessful participants at Year 20. This would indicate that the success attributes themselves were remarkably stable over time. Through the qualitative data, we were able to confirm that these attributes began to develop in the childhoods of our participants and remained relatively stable from the Year 10 to the Year 20 follow-up. Also, informants enhanced their ratings on the life stressor scale with comments and explanations in the transcripts that allowed the researchers to understand why the stress of having a learning disability greatly decreased from childhood to adolescence and again from adolescence to adulthood. As mentioned above, the role that mentors/significant others played for successfuls and unsuccessfuls significantly changed from Year 10 to Year 20 as did the social roles of participants, particularly in the reciprocity they were able to demonstrate in relationships. Finally, the qualitative data revealed a subtle change in the definition of the success attribute *emotional stability* from Year 10 to Year 20. Successful informants in their 30s reported instead that they had developed effective coping strategies in the face of emotionally stressful situations.

In addition, new themes emerged from the qualitative analysis, that is, that participants' LD had a profound influence on their lives in many contexts, that although the stress caused by having an LD decreased over time, participants continued to need services across their lives, and that many of these services were not in place at the present time. Participants stressed the sacrifices and adjustments that had been made by their families of origin. Finally, many participants reported painful social difficulties that have persisted into the present.

Relation to Earlier Longitudinal Research

Many of the above results on successful adult outcomes are consistent with findings of other qualitative longitudinal research in LD. For example, Werner's Kauai longitudinal study (Werner, 1993; Werner et al., 1971; Werner & Smith, 1977, 1989, 1992) employed both quantitative and qualitative techniques to identify protective factors that promoted successful adult adaptation in at-risk children, including those with LD. For example, Werner identified "supportive adults who fostered trust and acted as gatekeepers for the future" (1993, p. 32) as an essential component in promoting positive life outcomes for persons with LD. These supportive adults described by Werner parallel the social support system success attribute discussed in the present research. Similarly, Gerber

and colleagues' (Gerber & Reiff, 1991; Gerber et al., 1992; Reiff, Gerber, & Ginsberg, 1997) ethnographic studies of successful adults with LD emphasize that "social ecologies" (supportive and helpful people) play a critical role in achieving success for their participants.

There are other similarities between Werner's and Gerber's work and the research results reported here. For example, Reiff et al. (1997) stressed the importance of goal orientation, and Werner (1993) emphasized the need to establish realistic educational and vocational plans in achieving positive life outcomes. In the current discussion, successful adults with LD showed evidence of specific, yet flexible, planning in multiple areas, including education, employment, and family. Similar to the current study's success attribute of perseverance is Reiff et al.'s description of persistence. According to the authors, "the desire to succeed was not enough; one had to be willing to sacrifice and persevere" (1997, p. 110). A dimension was added to perseverance as a result of our qualitative analysis in that successfuls had the ability to be flexible; they knew when to persevere and when to quit.

Additionally, the importance of compartmentalizing and accepting the LD described under the success attribute of self-awareness shares features with Reiff and colleagues' discussion of "reframing"; that is, reinterpreting the LD experience from something "dysfunctional to something functional" (1997, p. 105). Of particular relevance is Reiff et al.'s emphasis on the need to accept and move beyond the disability. In the current article, we also showed that while successful informants acknowledged and accepted their disability, they saw it as only one aspect of themselves. It is noteworthy that the three studies mentioned above, which involved different participants and samples, employed different data collection methods and protocols, and spanned different periods of the informants' lifespan, all identified similar constructs as related to successful adult outcomes.

The present study also revealed a success attribute not reported by either Werner or Gerber: *emotional coping strategies*. Although Gerber (Gerber et al., 1992; Reiff et al., 1997) discusses coping strategies under "learned creativity," he makes no specific reference to the skills necessary to cope with emotional/psychological stress. Similarly, Werner and Smith (1992) document that study participants who made successful transitions to adulthood rated themselves lower in "Distress/Emotionality" than "unsuccessful" participants, but the researchers do not report on emotional coping strategies per se. In contrast, the present qualitative analysis revealed that successful informants had developed effective means of coping with stress, frustration, and emotional problems, as opposed to their unsuccessful counterparts. Our successful participants reported both that they were able to recognize what situations triggered stress for them, and that they had developed a number of effective strategies (e.g., "cooling off periods," seeking medical help, removing themselves temporarily from stressful situations).

As shown, participants in the current study reported that their LD had played a critical role across the entire span of their lives. Although the stress of having an LD decreased over time, it continued to affect them in many contexts and well into adulthood. They described a stage-like process of coming to terms with the limitations their LD imposed and with

being labeled by the larger society. Finally, many expressed unmet needs for services across their lives. Many other researchers have commented on the persistence of LD and its effect on adult outcomes (Bruck, 1992; Finucci, Gottfredson, & Childs, 1984; Gerber et al., 1990; Johnson & Blalock, 1987; Patton & Palloway, 1992; Vogel & Adelman, 1993). However, we are unaware of any other research describing a decrease in LD-related stress across the lifespan. The closest is Gerber, Reiff, and Ginsberg's (1994) report that positive critical incidents far exceeded negative ones in adulthood, but not during childhood and adolescence. In a replication of Gerber and Reiff's (1991) study conducted with 30 Dutch adults, Hellendoorn and Ruijsenaars (1998) noted that most of their respondents reported more social problems in their childhood than in their present lives.

Although there are no specific references to stages of acceptance of an LD in the LD literature, many authors in the general field of disabilities have discussed acceptance as a general symbol of psychological or personal adjustment. A few have extended or modified the stages originally suggested by Kubler-Ross (1969) to encompass acceptance of "handicapping" conditions (Cohn, 1961; P. Higgins, 1980; Livneh & Antonak, 1991; Livneh & Evans, 1984; Icabone & Galley, 1982; Reiff et al., 1997). The participants in this study spoke of a variety of social difficulties that followed them into adulthood. This finding is consistent with other research on LD adult outcomes (e.g., Gottesman, 1994; Kavale, Forness, & Bender, 1988; Learning Disabilities Association, 1996). Furthermore, the finding that study participants had specific unmet needs for social, educational, and psychological services into their adult years and beyond is echoed in several studies from the LD literature (Blalock & Johnson, 1987; Gerber et al., 1994; Hoffman et al., 1987; Kavale et al., 1988; Patton & Palloway, 1992; Vogel & Adelman, 1993).

Finally, "niche-picking," one of the components of the success attribute self-awareness reported in this study has also been identified by other researchers. In the present study, it appeared that successful participants displayed superior abilities compared to unsuccessful informants in selecting employment or social settings that accentuate their strengths. Similarly, Werner suggested that the "possession of skills and values leading to an efficient use of whatever abilities they had" (1993, p. 31) is necessary for the successful adaptation of LD adults. Along these lines, Reiff et al. identified "goodness of fit . . . where their skills and abilities could be optimized" within specific environments as an integral part of their model (1997, p. 111). The present investigation has made it possible to extend these findings to populations not included in the Gerber et al. and Werner et al. studies, that is, to moderately successful and unsuccessful adults with LD and to those in nonrural environments. Further, because the current study used a multidimensional definition of success, unlike the Gerber study, which focused on only vocational success, the present authors were able to generalize results to include success in independent living status, education, family and social relationships, life satisfaction, and mental and physical health.

Little description appears in the literature, however, of differences in the families of persons with LD. A notable exception is Roffman. Her qualitative study of 13 adults with

LD contains many accounts of positive family relationships and extraordinary support for the LD person from other family members (2000, pp. 79–82), as well as tensions directly related to the LD (2000, pp. 82–86). In addition, from their in-depth interviews with 30 Dutch adults with LD, Hellendoorn and Ruijsenaars report that 24 of the 30 respondents “spoke warmly and favorably about their present relationship to their parents. They experienced much support and concrete help from their parents and maintained a warm and strong attachment to them” (1998, p. 71; see also Margalit & Heiman, 1986).

Implications

This qualitative research clearly documents that growing up with an LD has a broad impact on life experiences and outcomes. Results revealed compelling evidence that the LD permeated virtually every functional context of our informants’ lives, including family and social relationships, employment, and community involvement. In light of these findings, it would seem that much of the LD field’s view of the challenges faced by individuals with LD has been shortsighted, focusing primarily on educational contexts. Based on the current research, individuals with LD need to learn to develop “strategies for success” across the life span, and in multiple contexts.

This qualitative research also confirms the need to reevaluate current educational practices used to enhance the lives of persons with LD. Traditionally, the field of LD has focused the majority of its intervention strategies on improving academic skills. However, it is clear from the experiences of our informants that such attributes as self-awareness, proactivity, perseverance, goal setting, the use of effective social support systems, and emotional coping strategies are more predictive of success than are academic skills. These findings question the validity of approaches that focus exclusively on remediation of academic abilities. At the least, the field needs to evaluate its current position and emphasize the development of success attributes to the same degree that we do academic skills.

Reiff, Gerber, and Ginsberg (1994, 1996) have developed a number of strategies and activities that concentrate on teaching several constructs similar to the success attributes described in this study. Similarly, Raskind, Goldberg, Higgins, and Herman (2002) present a framework for developing opportunities for students with LD to foster the success attributes. However, to date it is not clear whether success attributes can be taught to, and learned by, persons with LD.

This research confirms our own and others’ findings that, despite the tremendous efforts of parents, teachers, therapists, and individuals with LD themselves, learning disabilities do not go away—they are a lifelong condition (e.g., Gerber et al., 1992; Gottesman, 1979; Hoffman et al., 1987; Johnson & Blalock, 1987; Kavale, 1988). Given that fact, our informants have suggested that we need to place greater emphasis on developing compensatory strategies aimed at circumventing difficulties rather than spending inordinate time remediating deficits. In addition, our informants stressed the impor-

tance of developing special talents and abilities, “personal passions,” which traditionally have received little attention by parents and teachers.

Limitations

As has been mentioned, quantitative and qualitative research have different aims, goals, and beliefs about the nature of the reality they investigate; they come from different orientations and viewpoints and hold different standards for credibility. Quantitative research is considered credible if it is reliable and replicable. Qualitative research is considered credible based on its validity, that is, did the research gain real, rich, and deep data that represents the understandings of the informants. To a lesser extent, reliability is addressed by qualitative research methods such as triangulation, team research, and participant review. Taylor and Bogdan (1984) have suggested that reliability in qualitative research be viewed as the fit between what actually occurs and what is recorded as data. Expectations for the generalizability of qualitative findings must be altered in acknowledgment of these differences.

That being said, the current findings must be viewed in light of several limitations. Learning disability definitions and diagnostic criteria have changed since the participants in this study were first identified during childhood. This fact raises the possibility that some of the participants might not be considered as having learning disabilities by current “etic” definitions. However, it should be pointed out that the qualitative researchers were after the participants’ definitions and perceptions of their LD, rather than how outsiders might define them. Nevertheless, caution is advised in generalizing these findings to populations using current LD diagnostic criteria, which differ significantly from those used in the Frostig sample.

Another limitation that may be raised is that the sample size was small. Again, it should be remembered that large sample size is not as relevant in qualitative inquiry since it is a search for shared meanings rather than overt, countable behaviors. The homogeneous socioeconomic and ethnic makeup of the group did not allow for testing the relative importance of independent variables in the quantitative study in other than upper- and middle-class Caucasian samples of participants with LD. Similarly, the reader should be cautious about generalizing the qualitative findings to populations that differ ethnically and in social class. Finally, the study relied on participant interviews and self-reported data. Although every attempt was made to validate the self-reported data with other data sources (e.g., public records, relatives, case records), there is no guarantee that all the information provided by the informants was “true.” However, as mentioned previously, the purpose of qualitative research is to understand participants’ interpretations and perceptions, rather than determine cause/effect relationships. In this sense, the “truth” is what our participants tell us it is. The job of the qualitative researcher is to discover and derive hypotheses from the data. The informants’ willingness to candidly share their stories of courage in the face of adversity provided a richness and depth of data that otherwise would not have been possible. Their generosity is to be praised.

NOTES

1. The term *informants* is used interchangeably with *participants* throughout this article. The term is derived from the ethnographic perspective and emphasizes learning from people, rather than studying them (Spradley, 1979).
2. It should be noted that Gerber and colleagues (Gerber & Reiff, 1991; Gerber et al. 1992; Reiff et al., 1997) have been a major influence in the use of qualitative/ethnographic methods for research in LD.
3. There were no significant differences in the outcome measures of informants' ratings of nuclear family relationships, community involvements, incidence of arrest or substance abuse, or physical or psychological health (see Raskind et al., 1999 for a complete description of background variables and outcome measures).
4. In the quantitative analysis, this success attribute was identified as "emotional stability." The qualitative analysis has shed additional light on this attribute; as a result, it has been more aptly renamed "emotional coping strategies."

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REFERENCES

- Blalock, J., & Johnson, D. (1987). Primary concerns and group characteristics. In D. J. Johnson & J. W. Blalock (Eds.), *Adults with learning disabilities: Clinical studies* (pp. 31–45). Orlando, FL: Grune & Stratton.
- Bos, C. S., & Richardson, V. (1994). Qualitative research and learning disabilities. In S. Vaughn & C. Bos (Eds.), *Research issues in learning disabilities* (pp. 178–201). New York: Springer-Verlag.
- Bruck, M. (1992). Persistence of dyslexics' phonological awareness deficits. *Developmental Psychology*, 28, 874–886.
- Cohn, N. (1961). Understanding the process of adjustment to disability. *Journal of Rehabilitation*, 27, 16–18.
- Dabbs Jr., J. M. (1982). The rescue from relativism: Two failed attempts and an alternative strategy. *Educational Researcher*, 14, 13–20.
- Fafard, M. B., & Haubrich, P. A. (1981). Vocational and social adjustment of learning disabled young adults: A follow-up study. *Learning Disability Quarterly*, 4, 122–130.
- Fink, R. (1998). Literacy development in successful men and women with dyslexia. *Annals of Dyslexia*, 48, 311–347.
- Finucci, J. M., Gottfredson, L. S., & Childs, B. (1984). Explaining the adult careers of dyslexic boys: Variations in critical skills for high level jobs. *Journal of Vocational Behavior*, 24, 355–373.
- Gerber, P. J., Ginsberg, R., & Reiff, H. B. (1992). Identifying alterable patterns of vocational success in highly successful adults with learning disabilities. *Journal of Learning Disabilities*, 25, 475–487.
- Gerber, P. J., & Reiff, H. B. (1991). *Speaking for themselves*. Manchester, UK: Manchester University Press.
- Gerber, P. J., Reiff, H. B., & Ginsberg, R. (1994). Critical incidents of highly successful adults with learning disabilities. *Journal of Vocational Rehabilitation*, 4, 105–112.
- Gerber, P. J., Schneiders, C. A., Paradise, L. V., Reiff, H. B., Ginsberg, R., & Popp, P. A. (1990). Persisting problems of adults with learning disabilities: Self-reported comparisons from their school-age and adult years. *Journal of Learning Disabilities*, 23, 570–573.
- Gottesman, R. L. (1978). Follow-up study of reading achievement in learning disabled children. *ERIC Document Reproduction Service* ED155883.
- Gottesman, R. L. (1979). Follow-up of learning disabled children. *Learning Disability Quarterly*, 2, 60–68.
- Gottesman, R. L. (1994). The adult with learning disabilities: An overview. *Learning Disabilities: A Multidisciplinary Journal*, 5, 1–14.
- Hellendoorn, J., & Ruijsenaars, W. (1998). Dutch adults with learning disabilities viewed by themselves. *Thalamus*, 16, 65–76.
- Higgins, E. L., Raskind, M. H., Goldberg, R., & Herman, K. (2002). Stages of acceptance of a learning disability: The impact of labeling. *Learning Disability Quarterly*, 25(1), 3–18.
- Higgins, P. (1980). *Outsiders in a hearing world: A sociology of deafness*. Beverly Hills, CA: Sage Publications.
- Hoffman, F. J., Sheldon, K. L., Minskoff, E. H., Sautter, S. W., Steidle, E. F., Baker, D. P. et al. (1987). Needs of learning disabled adults. *Journal of Learning Disabilities*, 20, 43–52.
- Icabone, D. G., & Galley, M. E. (1982). Caught in the mainstream: The severely and profoundly retarded learner and the least restrictive environment. *Rehabilitation Literature*, 43, 66–71.
- Johnson, D. J., & Blalock, J. W. (Eds.). (1987). *Adults with learning disabilities: Clinical studies* (pp. 31–45). Orlando, FL: Grune & Stratton.
- Kavale, K. A. (1988). The long-term consequences of learning disabilities. In M. C. Wang, M. C. Reynolds, & H. J. Walberg (Eds.), *Handbook of special education, Volume II* (pp. 303–344). Oxford, UK: Pergamon Press.
- Kavale, K. A., Forness, S. R., & Bender, M. (1988). Adult outcomes. In K. A. Kavale, S. R. Forness, & M. Bender (Eds.), *Handbook of learning disabilities, Volume III: Programs and practices* (pp. 199–218). Boston, MA: College-Hill Publication.
- Kubler-Ross, E. (1969). *On death and dying*. New York: MacMillan Publishing Co.
- Learning Disabilities Association of America, Adult Issues Committee. (1996). *They speak for themselves: A survey of adults with learning disabilities*. Pittsburgh, PA: Learning Disabilities Association of America.
- Livneh, H., & Antonak, R. F. (1991). Temporal structure of adaptation to disability. *Rehabilitation Counseling Bulletin*, 34, 298–319.
- Livneh, H., & Evans, J. (1984). Adjusting to disability: Behavioral correlates and intervention strategies. *Personnel and Guidance Journal*, 62, 363–365.
- Major-Kingsley, S. (1982). *Learning disabled boys as young adults: Achievement, adjustment and aspirations*. Unpublished doctoral dissertation. Los Angeles, CA: University of California.
- Margalit, M., & Heiman, T. (1986). Family climate and anxiety in families with learning disabled boys. *Journal of the American Academy of Child Psychiatry*, 25, 841–846.
- McKinney, J. D. (1994). Methodological issues in longitudinal research on learning disabilities. In S. Vaughn & C. Bos (Eds.), *Research issues in learning disabilities: Theory, methodology, assessment and ethics* (pp. 202–232). New York: Springer-Verlag.
- Patton, J. R., & Polloway, E. A. (1992). Learning disabilities: The challenges of adulthood. *Journal of Learning Disabilities*, 25, 410–415, 447.
- Raskind, M. H., Goldberg, R. J., Higgins, E. L., & Herman, K. L. (1999). Patterns of change and predictors of success in individuals with learning disabilities: Results from a twenty-year longitudinal study. *Learning Disabilities Research & Practice*, 14, 35–49.
- Raskind, M. H., Goldberg, R. J., Higgins, E. L., & Herman, K. L. (2002). Teaching "life success" to students with learning disabilities: Lessons learned from a 20-year study. *Intervention in School and Clinic*, 37, 201–208.

- Reiff, H. B., Gerber, P. J., & Ginsberg, R. (1994). Instructional strategies for long-term success. *Annals of Dyslexia*, 44, 270–288.
- Reiff, H. B., Gerber, P. J., & Ginsberg, R. (1996). What successful adults with learning disabilities can tell us about teaching children. *Teaching Exceptional Children*, Nov/Dec., 10–16.
- Reiff, H. B., Gerber, P. J., & Ginsberg, R. (1997). *Exceeding expectations: Successful adults with learning disabilities*. Austin, TX: Pro-Ed.
- Roffman, A. J. (2000). *Meeting the challenge of learning disabilities in adulthood*. Baltimore, MD: Brookes Publishing Co.
- Rogan, L. L., & Hartman, L. D. (1976). A follow-up study of learning disabled children as adults: Final report. *ERIC Document Reproduction Services* No. ED 1634728.
- Rogan, L. L., & Hartman, L. D. (1990). Adult outcome of learning disabled students ten years after initial follow-up. *Learning Disabilities Focus*, 5, 91–102.
- Spekman, N. J., Goldberg, R. J., & Herman, K. L. (1992). Learning disabled children grow up: A search for factors related to success in the young adult years. *Learning Disabilities Research & Practice*, 7, 161–170.
- Spradley, J. P. (1979). *The ethnographic interview*. New York: Holt, Rinehart, & Winston.
- Spradley, J. P. (1980). *Participant observation*. New York: Holt, Rinehart & Winston.
- Stainback, S., & Stainback, W. (1988). *Understanding and conducting qualitative research*. Dubuque, IA: Kendall/Hunt.
- Taylor, S., & Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meanings*. New York: John Wiley.
- Vogel, S. A., & Adelman, P. B. (1993). *Success for college students with learning disabilities*. New York: Springer-Verlag.
- Werner, E. E. (1993). Risk and resilience in individuals with learning disabilities: Lessons learned from the Kauai longitudinal study. *Learning Disabilities Research & Practice*, 8, 28–35.
- Werner, E. E., Bierman, J. M., & French, F. E. (1971). *The children of Kauai*. Honolulu, HI: University of Hawaii Press.
- Werner, E. E., & Smith, R. S. (1977). *Kauai's children come of age*. Honolulu, HI: University of Hawaii Press.
- Werner, E. E., & Smith, R. S. (1989). *Vulnerable but invincible: A longitudinal study of resilient children and youth*. New York: Adams, Bannister, Cox.
- Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithaca, NY: Cornell University Press.

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