



A National Gateway to Self-Determination

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A Series of Papers on Scaling-Up Efforts to Promote Self-Determination

Paper 1: A Social-Ecological Approach to Promote Self-Determination

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The National Gateway to Self-Determination

The National Gateway to Self-Determination (SD) is a consortium of University Centers for Excellence in Developmental Disabilities (Missouri, Kansas, Oregon, New York, Illinois) in partnership with a National Self-Determination Alliance (including self-advocates, families, and numerous national partners). The overall goal of this project is **“to establish a sustainable, evidence-based training system that enhances self-determination training programs that lead to quality of life outcomes for individuals with developmental disabilities throughout the lifespan.”**

There are a number of important beliefs upon which this SD initiative is founded. They include:

- SD is best considered in the context of a **social-ecological framework**
- Development of SD is a **lifelong process**
- Scaling-up SD training activities must occur within an **evidence-driven** framework
- The development of SD is a means to obtaining an **improved quality of life**
- People with developmental disabilities **must be equal partners**

The purpose of this series of papers is to fill existing gaps in the SD literature related to these beliefs. For more resources on self-determination, please visit the National Gateway to Self-Determination website: www.aucd.org/ngsd.

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Over the past two decades, promoting self-determination has emerged as an important topic of discourse within the field of developmental disabilities. Enhancing self-determination continues to be a widely referenced and highly valued goal that influences national legislation, federal and state policy, and practice in the field, and that is collectively agreed upon as important to improve the quality of life of people with disabilities. In 2008, the U.S. Administration on Developmental Disabilities (ADD) announced funding for a National Training Initiative on Self-Determination (SD NTI) to scale up efforts to promote self-determination across the lifespan. As noted in the introduction to this special topic issue, the articles in the issue represent the consensus of the SD NTI consortium with regard to how to best approach such efforts. The primary purpose of this, the first article in the special issue, is to introduce a *conceptual model of intervention*, referred to as a “social-ecological approach to promote self-determination,” that will guide our efforts to scale up the promotion of self-determination.

It is important to state at the outset that in this article, we define “intervention” very broadly. As a “national training initiative,” it is our responsibility to conduct project activities that, ultimately, result in greater self-determination for people with developmental disabilities. We are aware, however, that the use of the term “interventions” might bring to mind only more traditional understandings of the term, such as teaching a person a skill or providing some form of treatment to address a problem. As should become clear as our intervention model is described,

however, we use the term intervention in its broadest sense, pertaining to any action, activity, or circumstance that results in improved or enhanced self-determination. Such “interventions” can take the form of modifications to work environment through activities such as job carving or job sharing to enable the person to succeed in employment; activities to change the attitudes and actions of the others, including the public; or enabling a person to do more on his or her own behalf. Interventions, though, must be intentional; that is, they are purposely implemented to effect change, in this case that change refers to promoting self-determination.

It is also worth emphasizing that this article describes a “model of intervention” to promote self-determination and not a “model of self-determination” in and of itself. Our attempt is not to formulate a new model or theory of self-determination (e.g., to answer the question “What is self-determination?”), but instead to propose a model of intervention that answers the question: “How best do we promote self-determination?” A brief description of how we conceptualize self-determination (e.g., answer the “What is self-determination?” question) is, however, necessary before describing the intervention model itself.

The Self-Determination Construct and Developmental Disabilities

Our understanding of self-determination draws upon three empirically validated theoretical frameworks that conceptualize the self-determination construct. These theoretical models—a functional theory of self-determination validated by Wehmeyer and colleagues, a social-ecological theory of self-

determination conceptualized by Abery and Stancliffe, and a self-regulation theory of self-determination contributed by Mithaug—are covered in detail in the text *Self-Determination: Foundations for Educational Practice* (Wehmeyer, Abery, Mithaug, & Stancliffe, 2003) and readers desiring greater detail about these models than can be provided in the context of this special topic issue are referred to that source. Two other conceptual models of self-determination, one developed by Powers and colleagues and the other by Field and colleagues, also contribute to our understanding of the construct itself and are also discussed in the Wehmeyer et al. (2003) text.

All of these theories share the overarching conceptualization that self-determination is a psychological construct situated within the broader, organizing structure of theories of human agency. Human agency refers to the capacity of human beings to make choices and to impose those choices on the world; to be an agent, noted Bandura, is to intentionally make things happen by one's actions" (2001, p. 2). A *human agentic* perspective of self-determination, then, views people as active contributors to, or "authors" of their behavior.

The self-determination construct's origins lie in the discipline of philosophy and in discourse in that discipline about the doctrines of *determinism* and *free will*. Determinism is the philosophical doctrine positing that events, such as human behavior, are effects of preceding causes. Self-determination, or *self-determinism*, as a psychological construct, refers to self- (vs. other-) caused action—it refers to people acting volitionally, based on their own will.

Volition refers to the capability of conscious choice, decision, and intention. People who are self-determined, as such, are causal agents in their lives; they cause or make things happen. They do that through self-caused action (causal agency) or through actions of others taken on one's own behalf, referred to as proxy agency (Bandura, 2001). Bandura noted, with regard to proxy agency:

In many spheres of functioning, people do not have direct control over the social conditions and institutional practices that affect their everyday lives. Under these circumstances, they seek their well being, security, and valued outcomes through the exercise of proxy agency. In this socially mediated role of agency, people try by one means or another to get those who have access to resources or expertise or who would wield influence and power to act at their behest to secure the outcomes they desire (p. 13).

Within a social-ecological approach to promote self-determination, in addition to actions to facilitate causal or proxy agency, there are actions that are focused on the context or the environment, which in turn, enable causal or proxy agency. That is, there are intervention actions that modify the demands, nature, or characteristics of the environment, task, or context so that people can act on their own behalf or, alternatively, others can act for them based upon their wishes and desires. The Developmental Disabilities Act of 2000 defined "self-determination activities" in a manner such as to provide examples of the

types of actions that might be undertaken to promote self-determination, and this definition aptly illustrates the tripartite nature of agentic action within a human agentic perspective of self-determination.

The Act defined “self-determination activities” as, “activities that result in individuals with developmental disabilities, with appropriate assistance, having: the ability and opportunity to communicate and make personal decisions; the ability and opportunity to communicate choices and exercise control over the type and intensity of services, supports, and other assistance the individual receives; the authority to control resources to obtain needed services, supports, and other assistance; opportunities to participate in, and contribute to, their communities; and support, including financial support, to advocate for themselves and others, to develop leadership skills, through training in self-advocacy, to participate in coalitions, to educate policymakers, and to play a role in the development of public policies that affect individuals with developmental disabilities.”

Thus, a focus on enhancing the individual’s capacity or ability and developing skill sets relates to efforts to promote causal agency; the provision of supports and assistance refers to proxy agency; and efforts to create opportunities reflect the importance of action on the environment. The overarching goal of this National Training Initiative is to assist in reducing the gap that exists between the promise and reality of efforts to promote self-determination by the adoption of a social-ecological model for intervention. To that end, the remainder of this article will

examine this social-ecological model of intervention to promote self-determination.

A Social-Ecological Approach to Promote Self-Determination

Just as is emphasized within human agentic theories of self-determination, a social-ecological model for intervention emphasizes the complex interactions that occur between person-and environment-specific variables and that account for significant changes in human behavior and enhanced human functioning. Person-environment interaction models date back to the earliest years of the 20th century in psychology (Chartrand, 1991; Neufeld, Rasmussen, Lopez, Ryder, Magyar-Moe, Ford et al., 2006). Many aspects of human behavior can be explained by these interactive processes, and a number of examples exist in the literature of the application of such person-environment interaction models to disability contexts. For example, Calkins and Walker used a social-ecological framework to examine learning and adjustment processes for persons with developmental disabilities within the social context of employment settings (Calkins & Walker, 1990). Currently, the U.S. Department of Health and Human Services’ Center for Disease Control incorporates a social-ecological model to address public health issues, and the World Health Organization uses a social-ecological model to provide a theoretical framework for defining disability. In our view, a social-ecological approach is one of the few intervention models that has the necessary breadth for conceptualizing the complex and reciprocal environmental and personal variables and dynamics required to effectively design and

evaluate interventions to promote self-determination.

The strengths of person-environment interaction models are manifold, the first being that unlike more traditional education or treatment models, the locus of the intervention within a social-ecological approach is distributed between enhancing the capacity of the person and changing the expectations or characteristics of the environment or context. Further, such models are strengths-based, emphasizing a person's capacities and abilities. This strengths-based approach parallels changes in how disability is understood, as conceptualizations of disability shift from a deficits-based approach to a strengths-based approach, such as that proposed by the World Health Organization's *International Classification of Functioning, Disability, and Health* (ICF; WHO, 2001), in which disability is manifested as a state of functioning that exists only within the fit between the person's capacities and the context in which the person functions.

Several features of or implications from person-context engagement models warrant mentioning with regard to the degree they impact a social-ecological approach to promote self-determination. First, as noted, such models are strengths-based and not deficits-focused. The design of any intervention begins with assumptions of competence and proceeds with a focus on enhancing the person's strengths or capitalizing on the person's existing strengths by modifications or accommodations within the environment or context. Second, a point that will be discussed in much greater detail in the second article is that person-context

engagement models recognize the need and provide the flexibility required to ensure that moderating variables, particularly variables that may be unique to distinct cultural contexts, are taken into consideration when designing interventions and, more importantly, become the drivers for specific modifications to the environment or context so as to ensure that interventions are not only effective but are culturally relevant. Finally, these person-environment engagement models emphasize the development of individualized supports to both increase personal capacity and provide accommodations for or modifications to the environment or context, and move away from creating static "programs" for service delivery that are based primarily on levels or types of disabilities.

Moderating and Mediating Variables Impacting a Social-Ecological Approach to Promote Self-Determination

The nature of the relationships among variables in a social-ecological approach to promote self-determination are complex; in part because explaining human behavior is a complex process and in part because self-determination is in and of itself a complex, multifaceted construct. We believe that a model for intervention must allow for interventionists to explain, predict and, ultimately, take into account variables that impact, either positively or negatively, the efficacy of the intervention and, when possible, to control for or exploit the effect of those variables. To that end, we build our intervention model on a theoretical foundation of self-determination that both conceptualizes the construct within a human agentic

perspective but also that conceptualizes factors to promote self-determination using the moderator versus mediator distinction used widely in social and personality psychological research.

First, it must be understood that moderator or mediator variables refer to the statistical relationships among predictor and outcome or criteria variables. Our intent within the NTI is to implement interventions that promote self-determination, so the outcome or criteria variable for which we are interested in identifying moderator or mediator variables is enhanced self-determination. Simply put, we are interested in identifying moderator or mediator variables that impact, positively or negatively, interventions to promote self-determination.

Baron and Kenny (1986), who introduced the moderator vs. mediator distinction to social psychology, defined a *moderator variable* as a “qualitative (e.g., sex, race, class) or quantitative ... variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable” (p. 1174). A *mediator variable*, as per Baron and Kenny, is a variable that “accounts for the relation between the predictor and the criteria” (p. 1176).

Hinshaw (2007), discussing mediator and moderator variables as they pertain specifically to intervention, defined moderator variables as “baseline factors that define subgroups with greater vs. lesser intervention response” and mediator variables as “factors occurring during treatment that explain how interventions ‘work’” (p. 1). Elaborating on these distinctions, Hinshaw noted:

Moderator variables refer to characteristics of a treatment sample that may influence the outcomes of interest, thereby identifying subgroups with greater or lesser chances for positive response. Mediator variables signify processes occurring during treatment that explain how and why the intervention is exerting its effects. Certain mediators, in fact, may serve as underlying mechanisms of change, those processes that are causally responsible for bringing about improvements in outcome (p. 2)

We focus on mediating variables in this paper, saving a discussion of moderating variables for the second paper in this special issue. Moderating variables refer not to factors that influence interventions as they are implemented, but instead, in essence, to characteristics of people (e.g., race, ethnicity, gender, etc.) that provide direction for creating unique interventions to promote self-determination rather than identifying those mediating factors that should be a part of all intervention efforts. For example, Wehmeyer (Wehmeyer et al. 2003) found that female high school students with cognitive disabilities were disproportionately likely to need (and benefit from) interventions to promote self-determination, and, as such, suggested that a targeted intervention to promote the self-determination of girls and young women with cognitive disabilities was warranted (Wehmeyer et al. 2003). In this case, gender was a moderating variable (e.g., girls formed a subgroup of youth with greater or

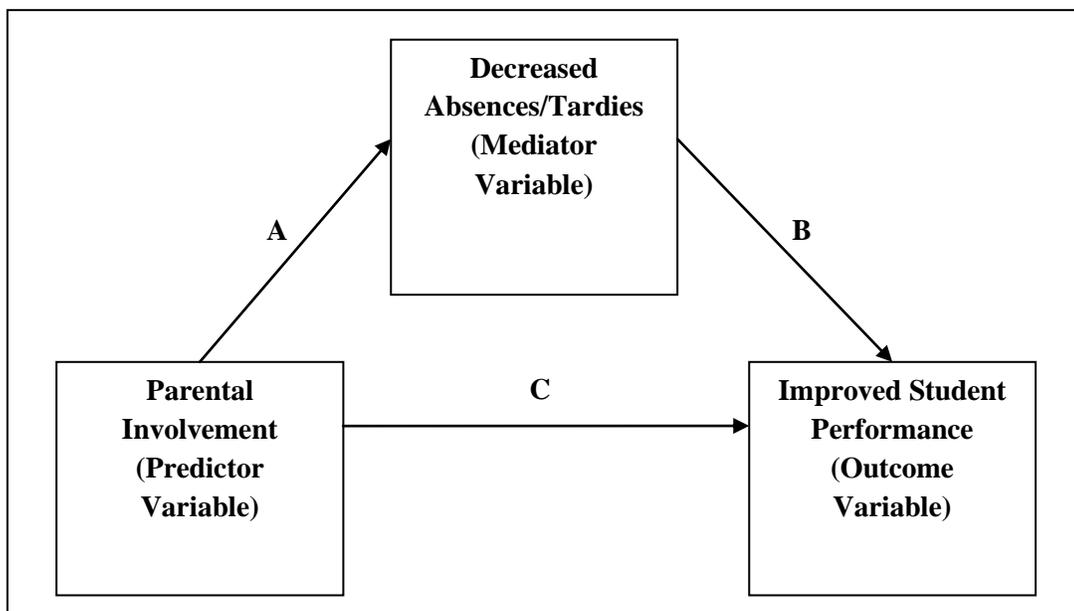
lesser chances for positive responses to intervention), the response to which was to develop a unique, targeted curriculum. Mediating variables, by and large, identify factors that would benefit any intervention attempt, whether it was targeted based upon moderating variables or whether it was generic and intended for all audiences.

Returning, then, to issues pertaining to mediator variables, it is important to note that such variables have a causal relationship with outcome variables. Take, for example, the relationship between parental involvements in education. It is well established that parental involvement in a student's educational program results in more positive school-related outcomes, including improvements in achievement scores and grades. There is, in other words, a hypothesized causal relationship between

the predictor variable (level of parental involvement) and the outcome variable (student performance), typically identified by a statistically significant correlation between the two variables. That effect is, however, an example of a mediating variable because further research showed that the main effect of parental involvement is on increased school attendance and decreased absences and late arrivals. These latter or mediating variables (increased school attendance, decreased absences and late arrivals) directly and positively impact grades and achievement, and thus are mediator variables accounting for a portion of the effect of parental involvement on student performance.

Figure 1 depicts the mediated effect of parental involvement on improved

Figure 1: Mediated Effect of Parental Involvement on Improved Student Performance

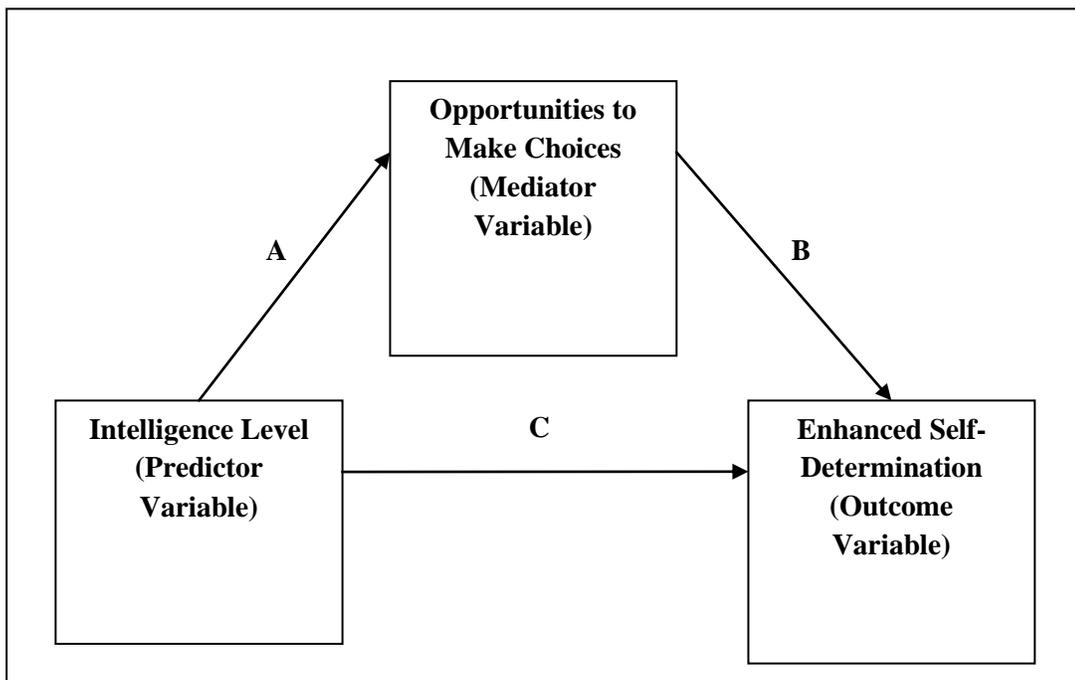


student performance. Turning now to an example from research on self-determination, it is clear that intellectual ability plays a mediating role in predicting the outcome of enhanced self-determination. Wehmeyer and colleagues (2003) examined personal characteristics presumed to impact a person's level of self-determination, including age, level of intelligence, living or work arrangements, and choice opportunities, among others.

As depicted in Figure 2, there was a significant correlation between IQ level and self-determination scores, suggesting a causal relationship (e.g., level of IQ causes, in some way, level of self-determination). Using regression analysis, though, Wehmeyer and Garner (2003) found that IQ did not directly predict self-determination

level but instead directly predicted where the person was most likely to live or work. People with lower IQ scores were more likely to live or work in more restrictive environments, which were found to restrict choice-making opportunities (Wehmeyer & Garner, 2003). Unlike IQ, choice-making opportunities did predict higher self-determination. Thus, choice-making opportunities is a mediating variable between intellectual ability and self-determination. If, in a mediation model, controlling for the mediator variable actually reduces the relationship between the predictor variable and the outcome variable to zero, the mediation effect is said to be complete. In most cases, however, the mediating effect is (or is predicted to be) partial, as it is with the intellectual

Figure 2: Mediated Effect of IQ on Enhanced Self-Determination



ability-self-determination level example. Even controlling for choice-making opportunity, a person's intellectual capacity will impact self-determination, though not, we would argue, to the degree that most people believe and not enough to suggest that intellectual capacity should, in any way, be a gatekeeper as to who has access to interventions to promote self-determination. The implication of this knowledge for interventions to promote self-determination seems self-evident: Interventions should maximize the opportunities people have to make choices in their lives.

It is worth noting, as well, that self-determination can serve as a mediating variable for other outcomes. Shogren, Lopez, Wehmeyer, Little, & Pressgrove (2006), for example, examined the relationships among multiple positive psychological variables for high school students with and without disabilities to build a model to predict lifestyle satisfaction. Variables examined using a structural equation modeling process included self-determination, hope, optimism, and perceptions of control. Hope and optimism directly predicted lifestyle satisfaction; self-determination and locus of control were mediating variables. We believe the same is true for quality of life as an outcome variable; that is, that self-determination plays a mediating role in enhancing quality of life.

Social Effectiveness, Social Capital, and Social Inclusion as Mediating Factors for Interventions to Promote Self-Determination

Because, as we have indicated, self-determination always has a social context (i.e., it is always self- vs. other- caused behavior), it stands to reason that social variables play an important role in mediating the effect of interventions to promote self-determination. In fact, the "other" determinant in the self- vs. other-determination equation is almost always other people or circumstances in which the "will" of other people comes into play. When, for example, research finds that more restrictive environments limit choice-making opportunities for people with intellectual and developmental disabilities, it is usually not the physical environment itself that limits choice opportunities but instead the rules and regulations implemented in that environment and the way in which other people interact with the person. It is true that some physical aspects of the environment restrict choice opportunities and thus limit self-determination because of the starkness, lack of accessibility, and other physical features of that environment, but, overwhelmingly, the barrier to self-determination is in the form of some human decision or action—the imposition, as it were, of someone else's will—and not the physical environment itself. Elizabeth Boggs, a founder of The Arc of the United States, used to tell a story that illustrates this point. The developmental center in which her adult son lived did not allow residents to order pizza from a pizza delivery service. The reasons for this were, in the minds of the center's administrators,

important: there was the risk that the pizza would be delivered and be too hot—thus potentially resulting in injury by burning—or too cold, thus resulting in increased potential for illness due to food-borne contaminants. Obviously, health-related intentions aside, the ultimate outcome was that the people who lived in that developmental center had restricted opportunities to choose ... in this case whether they had pizza and by extension whether they had any food delivered. When administrative and organizational rules and regulations such as this stack up, it is easy to see how one's opportunities to become self-determined become severely limited.

Because, then, self-determination always has a social context and because that social context almost always involves other people, either directly or indirectly, it stands to reason that social variables will play an important role in enhanced self-determination and will be important mediators for interventions to promote self-determination. Research to test this presumption has not been conducted although related research has shown that people with intellectual and developmental disabilities with higher adaptive behavior scores are more likely to be self-determined (Nota, Ferarri, Soresi, & Wehmeyer, 2007; Stancliffe, Abery, & Smith, 2000), a finding that supports the potentially important mediating role social behaviors play in self-determination since social skills form only a part of adaptive behavior measures. Specifically, there are three forms of social behavior that we believe serve as mediator variables to the promotion of self-determination: *social effectiveness* (McFall, 1982), *social capital* (Gardner & Carran,

2005; Cade, Carran, & Gardner, 2006; Trainor, 2008), and *social inclusion* (Siperstein & Parker, 2008).

Social effectiveness is one's ability to use social skills, strategies, and behavioral competencies to achieve preferred quality of life outcomes and to access key opportunities (making friends, recruiting social support networks, joining groups, managing one's life and daily routines, negotiating, etc.). We have opted to use the term social effectiveness (SE) rather than the more traditional term of social competence (SC) primarily because social effectiveness, as a variable, considers the effect or outcome of social interactions whether the person achieved desired outcomes or accessed beneficial opportunities; whereas, the notion of social competence harkens too much to the issues of personal competence and the lack thereof. A social effectiveness focus recognizes the importance of person-environment engagements as reciprocal (Gittell & Vidal, 1998; Cook, Gresham, Kern, Barreras, Thornton, & Crews, 2008). It is important to note that a focus on social effectiveness must extend much further than simply enhancing friendships or social networks but instead consider how social effectiveness strategies enable someone to achieve long-range goals. Some of these are interpersonal in nature (friendships, family relationships), certainly, but many are goals pertaining to other quality of life issues, such as obtaining and keeping a good job or creating a network to support one's inclusion in the community and to provide access to proxy agents and other forms of support that enable one to function successfully and maximize one's quality of

life. Such goal-related outcomes include efforts to build or access social capital.

Social capital refers to the networks of social ties, supports, relationships, trust, cooperation, affiliations, and social-behavioral reciprocity that enhance one's quality of life, lead to improvements in life chances, and satisfy basic psycho-social needs. For purposes of this NTI initiative, a working definition of social capital refers to: *The personal and collective power of people with disabilities and organizations to further their full inclusion within the community, to access social support networks, and to increase their quality of life.* Crosnoe (2004) has described the interplay of social capital within family and school contexts. He defines social capital as referring to the resources that flow from and through social ties. Crosnoe's research and conceptualization of social capital explore the overlap of family-based and school-based (micro-level versus macro-level) forms of it within a larger developmental ecology and is a valuable contribution to the knowledge base in this domain. *Social capital* involves two types of support groups or systems: *formal* and *informal*. Examples of formal supports are organizational affiliations such as People First, 4-H Clubs, Girl and Boy Scouts, etc. Informal supports consist of naturally occurring support networks and include family members, friends, neighbors, mentors, advocates, etc. Both are associated with achieving the goal of an improved quality of life. Social supports also represent a protective or buffering influence against negative outcomes and environmental risks (abuse, neglect, social isolation). (See the third article in this series for an analysis of risk and protective factors and their relationship

to a social ecological framework.) Finally, social supports often serve as a means of leveraging on behalf of people with developmental disabilities to access environmental opportunities and choices.

Further, two types of social capital have been recognized: *bonding social capital* and *bridging social capital*. Bonding refers to affiliating with others who share similar psycho-social characteristics, interests, and preferred activities that form the basis for friendships and shared goal attainment. Bridging, in contrast, involves affiliating with people having different characteristics, skills, perspectives, and relationships with others, in order to achieve an otherwise unattainable goal or result, for example, through leveraging. Bridging also occurs at an organizational level wherein two organizations join forces in order to achieve greater empowerment (Cade et al., 2006; Putnam, 2000).

Historically, a lack of social capital for people with disabilities has resulted in the recurring barriers that they often must confront in order to achieve full societal inclusion, and at one level, social effectiveness and social capital are mediating variables for social inclusion. Social effectiveness has a positive influence on one's level of social capital which, in turn, directly influences one's ability to access and negotiate inclusive settings and contexts along with their associated opportunities and choices. Individuals who possess a significant amount of social capital, as a rule, have the resources, leveraging capacity, and natural community supports necessary to achieve greater inclusion and a better quality of life. Social capital can lead to a more emotionally satisfying lifestyle, create more diverse

choices, and allow for greater autonomy in decision-making—elements that are so central to realizing greater self-determination in one’s life.

Social inclusion refers primarily to the presence and societal acceptance of people with disabilities within school, work, and community settings. As noted, social inclusion is often considered an outcome of social effectiveness, but in our self-determination intervention model, we conceptualize it principally as a mediating variable. That is, the degree to which one is socially included affects one’s opportunities to engage in self-determined actions, as well as impacting the experiences one has to learn about one’s preferences, interests, wants, and desires. Social inclusion serves as a mediating variable for interventions to promote self-determination because it provides the opportunities necessary for people to act volitionally and engage in self-determined actions. The research is clear that, when compared to more restrictive settings and experiences, people with developmental disabilities who are included in their communities, schools, and jobs have greater opportunities to make choices, express preferences, set and work toward preferred goals, make their own life decisions, and, ultimately, to become more self-determined (see Wehmeyer, Agran, Hughes, Martin, Mithaug, & Palmer, 2007 for a comprehensive overview of the impact of promoting self-determination on school and adult outcomes for people with developmental disabilities).

People often perceive social inclusion as a binomial variable; you either are or are not included. Further, the general impression of what it means to be socially included tends to emphasize large

social networks, a busy social calendar, a myriad of friends, and so forth. While not eschewing the above picture of a rich social life as desirable, it is our contention that social inclusion, as a construct, needs to be considered along a continuum that is determined exclusively by the volitional decision of an individual with regard to the size of one’s social network or the frequency of one’s social engagements. Simply put, social inclusion cannot be measured simply by the size of one’s social network or frequency of one’s social engagements; instead it must be considered as a function of the person’s personal preferences and the degree to which the social network results in sufficient social capital to enable the person to achieve the preferred goals for his or her life and to achieve his or her own personally relevant quality of life.

The importance of *social effectiveness* and *social inclusion* are broadly recognized in both the social behavior literature and in the developmental disabilities field, and the importance of *social capital* is, increasingly, being acknowledged. Their interactions are necessarily reciprocal and consistent with the variables comprising a social-ecological approach.

A social-ecological approach to promote self-determination that emphasizes social effectiveness, social capital, and social inclusion as mediating variables, we believe, provides a powerful foundation upon which to scale up efforts to intervene effectively in promoting self-determination. Such an approach recognizes that “interventions” must go well beyond traditional educational or training experiences that focus on enhancing personal capacity and must

include a range of supports, from facilitating experiences and enhanced opportunities that promote self-determination to supporting the creation of social networks that result in social capital and promotes proxy agency; from empowering people to direct their own learning or supports to advocating for policies and practices that emphasize the fundamental human right of all people to act volitionally and to live lives of greater quality.

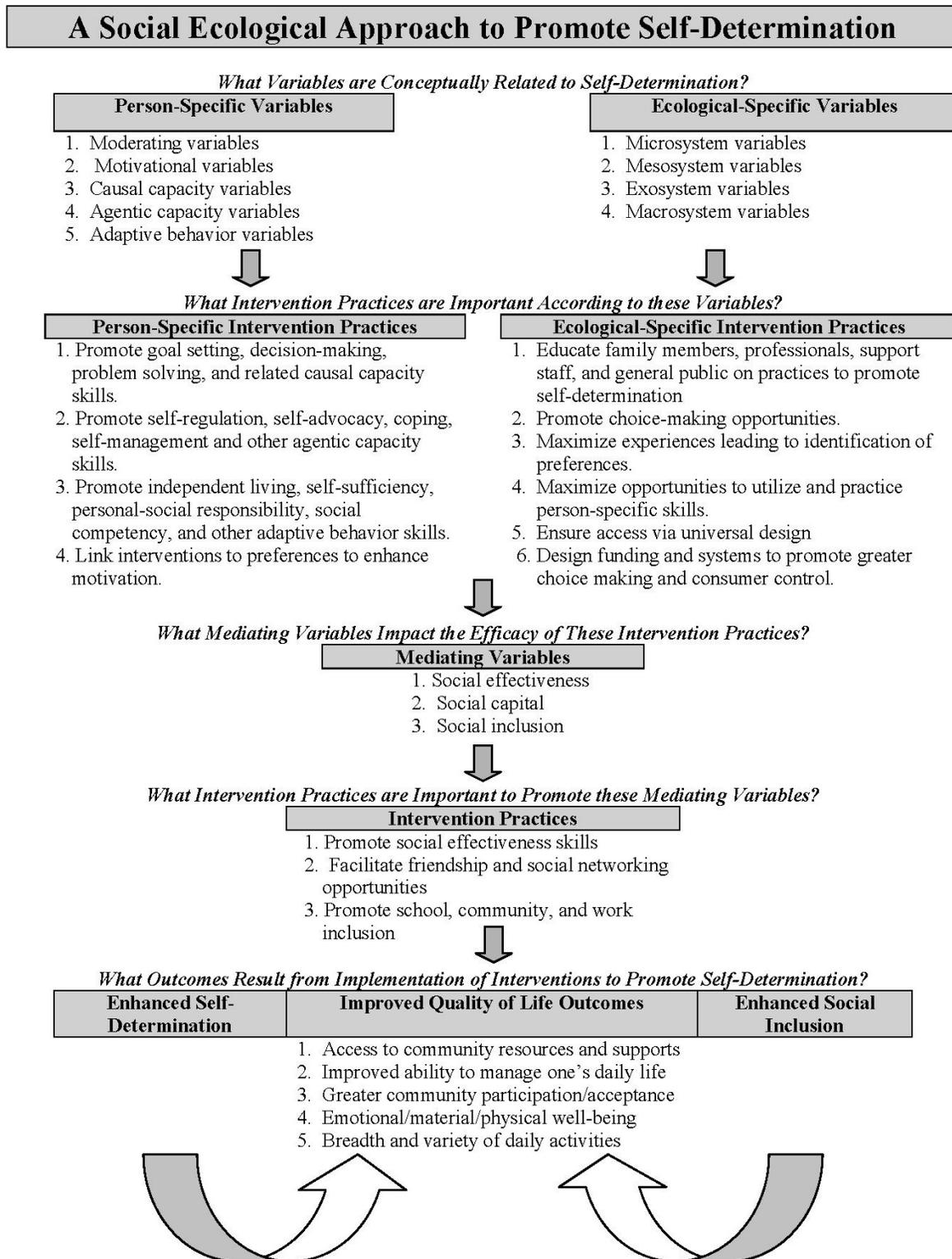
Conclusion

Figure 3 (see page 13) depicts the social ecological approach to promote self-determination that we have described in this article and that will drive our subsequent intervention efforts. As emphasized throughout this paper, the social ecological approach is grounded in a conceptual foundation of self-determination as a form of human agentic behavior, and the first level of the model depicts person-specific and environment specific variables that are derived from theory and research as related to self-determination. This level of the figure will be discussed in detail in the second article in this special issue. The second level of the figure identifies classes of person-specific and environment-specific intervention practices that are important as derived from the foundation of theory and

research. The third and fourth levels of the model depict the mediating variables that impact the efficacy of the interventions practices identified in the second level as well as the practices that are important to take advantage of the mediating effect of these variables in intervention. The final level depicts the expected outcomes from interventions to promote self-determination using the social ecological approach (levels 2 through 4). Obviously, enhanced self-determination is a critical outcome, but since research suggests that self-determination may, in and of itself, be a mediating factor for outcomes such as improved quality of life, we depict social inclusion (which results from the effects of intervention practices linked to both person-specific variables and mediating variables), as contributing to the overarching outcome for the NTI project: an improved quality of life for people with intellectual and developmental disabilities.

The remaining articles in this issue build on this model, providing a detailed discussion of self-determination and moderating variables that need to be taken into account when designing interventions (second article), identifying content areas for which there are gaps in the research and practice knowledge base that warrant consideration (third article), and reviewing extant interventions that fit within our social-ecological approach (fourth article).

Figure 3: A Social Ecological Approach to Promote SD



Author Note

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