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### Vulnerability and Experiences Related to Social Victimization Among Individuals With Intellectual and Developmental Disabilities

Marisa H. Fisher <sup>a</sup>, Andrew L. Moskowitz <sup>b</sup> & Robert M. Hodapp <sup>c</sup>

<sup>a</sup> Vanderbilt Kennedy Center, Vanderbilt University

<sup>b</sup> Center for Social Development and Education, University of  
Massachusetts Boston

<sup>c</sup> Vanderbilt Kennedy Center and the Department of Special  
Education, Peabody College of Vanderbilt University

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# **Vulnerability and Experiences Related to Social Victimization Among Individuals With Intellectual and Developmental Disabilities**

MARISA H. FISHER

*Vanderbilt Kennedy Center, Vanderbilt University*

ANDREW L. MOSKOWITZ

*Center for Social Development and Education, University of Massachusetts Boston*

ROBERT M. HODAPP

*Vanderbilt Kennedy Center and the Department of Special Education, Peabody  
College of Vanderbilt University*

*Compared to adults without disabilities, individuals with intellectual and developmental disabilities (IDD) are more likely to experience social victimization. This study examined responses of caregivers of 146 adults with IDD on questionnaires concerning demographics and behavioral characteristics as well as a newly developed Social Vulnerability Questionnaire (SVQ). Demographic and behavioral characteristics were related to risk factors of vulnerability. Caregivers provided examples of victimization experienced by individuals with IDD throughout the life span. Examples related to money/theft, teasing/persuasion, and abuse. Findings indicate that although individuals who are higher functioning are more aware of vulnerable situations, they still experience victimization at rates similar to those who are less able to detect risk. Those who were rated as more vulnerable displayed more externalizing behavior problems. Implications for research and practice are discussed;*

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Address correspondence to Marisa H. Fisher, Vanderbilt Kennedy Center, Vanderbilt University, 230 Appleton Place, PMB 40, Nashville, TN 37203. E-mail: Marisa.fisher@vanderbilt.edu

*research is needed to understand the risk factors of victimization and interventions are needed to teach self-protection skills.*

*KEYWORDS* intellectual disabilities, young adults, victimization, abuse

Compared to those without disabilities, individuals with intellectual and developmental disabilities (IDD) are at greater risk of experiencing abuse and social exploitation (Nettelbeck & Wilson, 2002; Petersilia, 2001; Sullivan & Knutson, 2000). As adults, individuals with IDD are twice as likely to experience crimes against the person (physical assault, sexual assault, robbery, and personal theft) and 1.5 times more likely to experience such property crimes as breaking-and-entering and household property theft (Wilson & Brewer, 1992). Overall, however, individuals with intellectual disabilities (ID) most often experience minor abuses such as being teased or cheated out of money as opposed to major abuses such as being beaten or raped (Halpern, Close, & Nelson, 1986). Such studies, usually based on interviews with individuals with IDD about experiences within the past year (Nettelbeck, Wilson, Potter, & Perry, 2000, Wilson & Brewer, 1992, Wilson, Seaman, & Nettelbeck, 1996), amply document the increased risks faced by adults with IDD for many forms of social exploitation.

Although some research now exists to document the forms of exploitation experienced by individuals with IDD, there is less research related to *why* they are socially vulnerable. Specific demographic characteristics thought to relate to victimization of adults with IDD include IQ/education, living arrangements, gender, and friendship (Greenspan, Loughlin, & Black, 2001); Wilson & Brewer, 1992). Thus, individuals with low academic achievement were 1.85 times more likely to experience victimization than individuals with higher academic achievement (Doren, Bullis, & Benz, 1996), and the risk for victimization was lowest for individuals with IDD living with family members and highest for those living alone or in a group setting (Wilson & Brewer, 1992). Women (vs. men) with IDD more often experience sexual abuse (Sobsey & Doe, 1991). Finally, individuals with IDD often have poor social intelligence, thereby limiting their understanding of people and social processes and leading to either social isolation or exploitation (Wilson et al., 1996). Due to these social limitations, individuals with IDD are often lonely and have few friends (McVilly, Stancliffe, Parmenter, & Burton-Smith, 2006). A desire to make friends could bring forth inappropriate cooperation or the inability to say no to strangers or to walk away from dangerous situations.

In addition to individuals' demographic characteristics per se, specific behavioral characteristics may also be related to increased vulnerability among individuals with IDD. For example, Nettelbeck et al. (2000) found

that victims were more likely than nonvictims to display angry or aggressive behaviors toward potential perpetrators. Further, individuals displaying vulnerable behaviors, such as acting gullible or not taking precautions, are thought to encourage perpetrators (Greenspan et al., 2001). Individuals with poor perspective taking and poor personal/social achievement also seem at increased risk of victimization (Doren et al., 1996), as these traits could make it difficult to recognize nonverbal and contextual cues that identify a situation as deceptive or manipulative (Wilson et al., 1996). Unfortunately, no measures exist to gain information on how these demographic and behavioral characteristics may relate to social vulnerability (Greenspan, 2008).

In addressing the need for more information concerning victimization of individuals with IDD, this study had four main goals. First, we developed a questionnaire to identify the specific types of exploitation experienced by individuals with IDD throughout the life span as well as to measure potential factors related to increased vulnerability to social victimization. Second, we expanded on the studies of Wilson and colleagues (Nettelbeck et al., 2000; Wilson & Brewer, 1992, Wilson et al., 1996) by using measures to determine whether vulnerability was related to characteristics of the individual's demographics (e.g., IQ, living arrangements, gender) and behaviors (e.g., aggression). Third, we examined whether demographic and behavioral characteristics could be used to predict vulnerability. Finally, to better understand the experiences of individuals with IDD, we examined specific examples of victimization reported by the caregivers.

## METHOD

### Participants

Participants included 144 parents or guardians (82.9% mothers, 6.8% fathers, 10.3% other) of adolescents and adults with IDD. Responses did not differ significantly based on the relationship of the respondent to the individual. Respondents reported information on 146 individuals with IDD (Table 1). Diagnoses included genetic disorders (e.g., Williams syndrome, Down syndrome; 50.7%), autism spectrum disorders (19.9%), intellectual disabilities of unspecified etiology (12.3%), psychiatric disorders (9.6%), cerebral palsy (2.7%), attention-deficit/hyperactivity disorder (2.7%), and hearing impairments (2.1%).

### Procedure

Participants were recruited through parent support groups, camps for individuals with disabilities, and disability-specific association websites, mailings, or electronic mailing lists. Most participants (87%) were from around the United States and had not had previous contact with this research lab or

**TABLE 1** Demographic Characteristics of Individuals With Intellectual and Developmental Disabilities

Variable	%	<i>M (SD)</i>
Gender		
Male	56	
Female	44	
Age		24.49 (7.99)
IQ below 70 (ID)	66	
Education		
Some high school	33	
Special education degree	35	
Completed high school or higher	30	
Number of friends		
0	26	
1	22	
2–3	33	
4 or more	19	
Living situation		
Living at home with family member	80	
Living outside the home	20	
Day placement		
Paid job	40	
Other	59	

*Note.* ID = intellectual disabilities.

our partners; a smaller group were parents of young adults who had participated in our center's research and/or camp programs (the two groups did not differ on age, IQ, living situation, or type of victimization experienced). Respondents were mailed a packet of questionnaires and a consent form as well as a stamped, self-addressed envelope in which to return the completed questionnaires. Respondents received a \$10 gift card for their participation. The rate of returned packets was 71.5%; most nonresponders indicated they did not have time to complete the questionnaires after receiving the research packet.

## Measures

### DEMOGRAPHICS

The first measure asked respondents basic information about the individual with IDD, including the person's age, estimated IQ (which we further divided into those below IQ 70, i.e., those with ID—and those above 70), type of disability, education level, living situation, and day placement.

### SOCIAL VULNERABILITY QUESTIONNAIRE (SVQ)

Designed for this study, the SVQ consisted of two parts. Part I included 45 statements on which the respondent rated the individual with IDD on a

4-point Likert scale (1 = *not true or never* to 4 = *very true or always*; questions are further described later). Questions for this section were derived from already existing measures of bullying, gullibility, abuse, and elder deception (Kopelioff et al., 2005; Nadeau, Tessier, Lefebvre, & Robaey, 2004; Olweus, 1996; Oktay & Tompkins, 2004; Pinsker, Stone, Pachana, & Greenspan, 2006). Part II was an open-ended question: "Can you give us an example of a time when your child/the individual has been taken advantage of?" For this open-ended question, two coders coded for reliability.

#### CHILD BEHAVIOR CHECKLIST (CBCL; ACHENBACH, 1991)

The CBCL consisted of 112 behaviors that were rated on a scale from 0 (*not present*) to 2 (*very true or often true*), yielding eight "narrow-band" factors, comprising two broad factors of internalizing (e.g., withdrawn, anxious-depressed) and externalizing (e.g., delinquent, aggressive) behaviors. The CBCL is a reliable and valid measure of psychopathology and has been used successfully in previous studies of children and adults with IDD (Dykens & Kasari, 1997; Rosner, Hodapp, Fidler, Sagun, & Dykens, 2004).

## RESULTS

### Establishing the Factor Structure of SVQ

Exploratory factor analysis of the 45 items was conducted using a maximum likelihood method for extraction with a direct oblimin rotation (because of the theoretical colinearity of the vulnerability construct, an oblique rotation was used). As the factor structure that emerged using the eigenvalue-greater-than-1 criterion produced 12 factors and was uninterpretable, only factors with an eigenvalue of 1.5 or above were accepted. This 7-factor structure met the criterion for the goodness-of-fit test and showed no interfactor correlations exceeding .5. We ultimately elected to remove the 7th factor from the factor structure because the only item with a factor loading greater than .5 had a stronger loading on another factor. The final factor structure of the SVQ, therefore, resulted in 30 items distributed in 6 factors (accounting for 49.1% of the variance). Table 2 displays the 30 items grouped by the 6 factors, their loadings, factor variance, the Cronbach's alpha value of internal reliability, and the factor means.

Based on item content, we labeled as follows each of the six factors. The first factor, Emotional Bullying, consisted of teasing or taunting behaviors or actions performed by others toward the individual with IDD. The second factor, Risk Awareness, included potential protective factors that are related to the ability to detect and avoid victimization by individuals with IDD. The third factor, Social Protection, related to the peer network of the

**TABLE 2** Variable Loadings and Factor Structure of the Social Vulnerability Questionnaire

Item	Factor 1: Emotional bullying	Factor 2: Risk awareness	Factor 3: Social protection	Factor 4: Perceived vulnerability	Factor 5: Parental independence	Factor 6: Credulity
Gets picked on by others	.89					
People/peers try to hurt his/her feelings	.83					
People/peers do mean things to him/her	.76					
People/peers make fun of him/her	.72					
Is often called names by others	.67					
Is likely to tell a parent/authority figure if something questionable happens (bully, scam)		.77				
Knows he/she has a disability		.70				
Recognizes potentially dangerous situations (entering a dark area)		.65				
Is encouraged to express emotion and to not take it out on someone or something else		.61				
Can accurately describe his/her disability to others		.60				
Knows not to talk to strangers and follows that rule		.59				
Was taught to think for himself/herself		.57				
Consults parents before making important decisions		.56				
Is able to read social cues, such as facial expressions (anger, teasing)		.54				
Has many friends			.85			
Is considered a part of a social peer group			.80			
Lives close to friends			.67			
Is isolated from peers <sup>a</sup>			-.61			
Others consider him/her to look different from same-age peers				.90		

*(Continued)*

TABLE 2 (Continued)

Item	Factor 1: Emotional bullying	Factor 2: Risk awareness	Factor 3: Social protection	Factor 4: Perceived vulnerability	Factor 5: Parental independence	Factor 6: Credulity
Others perceive him/her to have a disability		.76				
Others perceive as immature/naïve		.56				
Is smaller than individuals the same age		.50				
Parents are likely to leave alone for extended period of time (overnight)			.83			
Parents allow to be with individuals of the opposite sex with no supervision			.82			
Parents allow to be with older individuals with no supervision			.64			
Likely to believe a claim when there is evidence it should not be believed						.79
Asks inappropriate questions (social faux pas)						.67
Others perceive him/her to be easy to take advantage of						.59
Can be easily convinced to give money to others						.58
Is overly trusting of strangers or not-well-known individuals						.56
Eigenvalue	7.38	5.97	4.21	2.65	1.82	1.78
% of variance	16.41	13.27	9.36	5.89	4.05	3.95
Cronbach's alpha	.91	.84	.81	.72	.81	.81
Factor <i>M</i> ( <i>SD</i> )	8.93 (3.55)	19.24 (5.77)	10.30 (3.31)	12.25 (3.19)	6.44 (2.90)	13.67 (3.82)

<sup>a</sup>Factor 3's "Is isolated from peers" was reverse scored when computing Cronbach's alpha and overall factor scores.

individual with IDD, which could serve as a protective factor. The fourth factor, Perceived Vulnerability, included items related to physical traits that could lead others to perceive the individual with IDD as an easy target for victimization. The fifth factor, Parental Independence, included items related to the amount of independence afforded to the individual with IDD from the parents. Finally, the sixth factor, Credulity, included items related to reasons the individual with IDD might fall for certain types of victimization.

Two factors, Risk Awareness and Social Protection, were reverse coded as these factors contained items related to less vulnerability. After reverse scoring, higher scores on all factors related to more vulnerability within the factor area. In order to conduct a regression analysis, we then computed a total score for vulnerability, with higher scores indicating higher vulnerability.

## Relation of the SVQ Factors to Demographic Characteristics

### DATA ANALYSIS

To examine differences between the social vulnerability factors and several participant variables (i.e., gender, presence of ID, education level, friendship, living arrangements, and day placement), multivariate analysis of variance (MANOVA) tests were used, with follow-up analysis of variance (ANOVA) tests with Bonferonni correction procedures. All means and standard deviations can be found in Table 3. Differences were found between scores on the Risk Awareness, Parental Independence, Social Protection, and Perceived Vulnerability Factors and the demographic characteristics of ID, level of education, friendship, and living arrangement. There were no significant differences between any of the SVQ factors and gender or day placement (see Table 4 for Wilks's  $\Lambda$ ,  $F$ , and multivariate  $\eta^2$  values).

*Risk awareness.* Scores on the Risk Awareness factor differed based on whether the individual had ID, the person's level of education, and the number of friends. Compared to those with ID, individuals without ID scored lower on risk awareness,  $F(1, 104) = 8.87, p < .01, \eta^2 = .08$ ; those without ID were more aware of potential risks. Those individuals with at least a high school degree were more aware of risks than those who had earned a special education degree ( $p < .01$ ) but were no different from those who had completed some high school,  $F(2, 111) = 4.96, p < .01, \eta^2 = .08$ . Finally, those individuals with IDD who had at least one friend (compared with having no friends) received significantly lower scores on risk awareness,  $F(3, 107) = 8.80, p < .001, \eta^2 = .20$ ; there were no differences in risk awareness among those who had more than one friend.

*Parental independence.* Similarly, scores on the Parental Independence factor differed based on whether the individual had ID, the level of education, and the number of friends as well as the living arrangements of the individual with IDD. Specifically, compared to parents of individuals

**TABLE 3** Mean Ratings on the Social Vulnerability Questionnaire Factors by Demographic Characteristics

	Emotional bullying	Risk awareness	Social protection	Perceived vulnerability	Parental independence	Credulity
Intellectual disability (ID)						
No ID	8.86 (3.32)	16.66 (4.58)	10.51 (3.78)	9.97 (3.10)	8.06 (3.18)	13.03 (4.03)
ID	8.54 (3.31)	20.15 (6.15)	10.46 (3.08)	13.39 (2.49)	5.51 (2.83)	13.70 (3.67)
Gender						
Male	8.57 (3.40)	20.12 (5.96)	10.82 (3.31)	12.00 (3.06)	6.63 (2.88)	13.69 (3.73)
Female	8.82 (3.21)	18.18 (5.64)	9.96 (3.40)	12.74 (3.37)	5.98 (2.74)	13.52 (3.86)
Education level						
Some high school	9.20 (3.90)	19.65 (5.65)	10.23 (3.46)	12.30 (3.53)	5.55 (1.99)	14.48 (3.69)
Special ed degree	8.41 (3.06)	20.85 (6.75)	10.59 (3.42)	12.90 (2.62)	5.51 (2.60)	13.24 (3.76)
High school degree or higher	8.21 (2.66)	16.73 (4.08)	10.39 (3.22)	11.52 (3.67)	8.24 (3.05)	12.85 (3.67)
Number of friends						
0	8.10 (3.55)	23.35 (6.87)	13.16 (2.67)	12.42 (2.74)	5.29 (2.57)	14.06 (4.27)
1	9.29 (2.91)	16.42 (4.41)	10.79 (2.77)	12.75 (2.40)	7.50 (2.90)	13.67 (3.73)
2 or 3	8.47 (3.08)	18.42 (5.35)	10.09 (2.85)	12.65 (3.92)	6.26 (2.50)	13.41 (3.78)
4+	8.91 (3.73)	18.00 (3.95)	7.18 (2.06)	11.36 (3.39)	6.59 (2.87)	13.45 (3.45)
Living arrangements						
Lives at home with family	8.51 (3.37)	19.37 (5.81)	10.63 (3.45)	12.35 (3.16)	5.86 (2.50)	13.58 (3.82)
Other living arrangements	9.13 (2.91)	18.70 (6.31)	9.52 (2.81)	12.04 (3.42)	8.13 (3.29)	13.48 (3.50)
Day placement						
Not working	8.70 (3.29)	19.81 (6.16)	10.52 (3.29)	12.45 (2.96)	6.07 (2.52)	13.75 (3.63)
Paid job	8.65 (3.36)	18.33 (5.35)	10.33 (3.50)	12.13 (3.56)	6.76 (3.21)	13.41 (4.00)

**TABLE 4** MANOVA Scores for the Six Factors on the SVQ for Each Demographic Characteristic

Variable	Wilks's $\Lambda$	$F$	Multivariate $\eta^2$
Intellectual disability	.62	9.96**	.38
Gender	.92	1.54	
Education level	.73	3.07*	.15
Number of friends	.47	4.91*	.22
Living arrangements	.86	2.88*	.14
Day placement	.98	.43	

Notes. MANOVA = multivariate analysis of variance; SVQ = social vulnerability questionnaire.

\* $p < .01$ . \*\* $p < .001$ .

with ID, those parents of individuals without ID allowed their children to be in more risky situations,  $F(1, 104) = 22.99, p < .001, \eta^2 = .18$ . Further, those who earned at least a high school degree were rated higher on parental independence compared to both those with a special education degree and those who completed some high school,  $F(2, 111) = 13.25, p < .001, \eta^2 = .19$ . In addition, compared to those with no friends, individuals with IDD who had one friend were rated higher on parental independence,  $F(3, 107) = 3.14, p < .05, \eta^2 = .08$ . Finally, individuals living outside the home (vs. those living at home with a family member) had significantly higher Parental Independence scores,  $F(1, 112) = 13.29, p < .001, \eta^2 = .11$ .

*Social protection.* Friendship was the only demographic characteristic that was related to the Social Protection factor. Those individuals who had at least one friend were rated significantly lower in social protection than those with no friends,  $F(3, 107) = 22.38, p < .001, \eta^2 = .39$ ; those with four or more friends had the lowest social protection score compared with any other group,  $p < .001$ .

*Perceived vulnerability.* Only the presence of ID was related to whether or not the individual with IDD was perceived as vulnerable. Specifically, compared to those without ID, individuals with ID were more highly rated to be perceived as vulnerable,  $F(1, 104) = 37.59, p < .001, \eta^2 = .27$ .

### Relation of SVQ Factors to Behavioral Characteristics of Individuals With IDD

The SVQ factors were correlated with the domains of the CBCL to determine if ratings on certain factors were related to behavior problems. Thus, two SVQ factors, Emotional Bullying and Credulity, were significantly correlated with problem behaviors. First, individuals with IDD who were rated as having a high vulnerability to Emotional Bullying also had high internalizing, externalizing, and total problem behaviors (see Table 5). When looking at scores within the narrow-band problem behavior domains, Emotional

**TABLE 5** Correlations of the Social Vulnerability Questionnaire Factors and Child Behavior Checklist Domains

	Emotional bullying	Risk awareness	Social protection	Perceived vulnerability	Parental independence	Credulity
Internalizing	.28**	.14	.25**	.01	.04	.28**
Externalizing	.34**	.20*	.06	.09	-.07	.36**
Total problems	.39**	.25**	.21*	.15	-.05	.44**

\* $p < .01$ . \*\* $p < .001$ .

Bullying was significantly related to all of the externalizing behavior problems ( $r_s = .26-.39$ ,  $p_s < .01$ ) as well as to social ( $r = .51$ ,  $p < .01$ ) and thought ( $r = .21$ ,  $p < .05$ ) internalizing behavior problems.

Next, individuals with IDD who were rated as highly credulous also exhibited many behavior problems, with Credulity correlating with all but one problem behavior ( $r_s = .20$  to  $.48$ ,  $p_s < .01$ ). Thus, individuals who were more likely to fall for certain types of victimization had significant behavior problems. Correlations between the remaining SVQ factors and either the CBCL wide-band and narrow-band factors were generally weak and inconsistent.

### Predicting Vulnerability

Based on our findings, we built a regression model to predict a total score on the SVQ based on demographic and behavioral characteristics. Variables that were both statistically and theoretically relevant were included in the model; thus, predictor variables included ID status, presence of friends, living arrangements, and the CBCL total score. ID status, having friends, and living arrangements were selected because they were significantly different across several of the SVQ factors. Further, because various CBCL dimensions were correlated with different SVQ factors, the total score was entered to keep the two models parallel.

Presence of ID, not having friends, and total CBCL score predicted a significant amount of the variance vulnerability,  $r^2 = .404$ ,  $F(4, 97) = 16.43$ ,  $p < .001$ . Total CBCL score was the strongest predictor of vulnerability,  $b = .52$ ,  $t(101) = 6.28$ ,  $p < .001$ , and accounted for 24% of the variance predicted by the model beyond what could be predicted by the other predictors. The second strongest predictor of vulnerability was not having friends,  $b = -7.40$ ,  $t(101) = -3.73$ ,  $p < .001$ , and accounted for 8% of the variance beyond what is predicted by the other predictors. Finally, having ID predicted 3% of unique variance in vulnerability,  $b = 4.39$ ,  $t(101) = 2.27$ ,  $p < .05$ . Living arrangements was not a significant predictor of vulnerability.

## Identifying Types of Victimization

The large majority of respondents (74.7%) provided at least one example of a time when the individual with IDD experienced victimization. Of the other 37 respondents, 12 stated the individual had not been taken advantage of, 15 left the question blank, 5 responses were too vague to score, and 5 respondents indicated that the individual with IDD is never left alone or is always protected from victimization. Two coders examined the remaining responses for the type of example provided, identifying three main types with a high level of intercoder reliability (Cronbach's  $\alpha = 0.86$ ).

The most frequent examples related to teasing and persuasion, as 35.6% of the sample provided examples relating to the individual with IDD being teased or persuaded to do something questionable. Stories included the following: "He has been verbally made fun of at school"; "[Other children] telling her to do something or say something repeatedly so they could laugh." Next, 34.2% of respondents provided examples related to money or theft. Examples included the following: "He wanted a bandana (which costs \$1). A classmate told him he'd get him one for \$20. He gave him \$20 for it"; "Ring, coats, etc. have been taken by others." Finally, 21.2% of examples related to instances of physical or sexual abuse. Examples included the following: "[He] was hurt (bruised/fingernail lacerations) while in school"; "She has been deceived by a couple of older teen boys to lead toward sexual activity. She believed they liked her."

A few respondents provided more than one example of victimization. Thirteen respondents provided both teasing/persuasion and money/theft examples; 5 provide examples related to teasing/persuasion and abuse; 2 provided examples related to both money/theft and abuse; and finally, 2 respondents provided examples related to all three forms of victimization.

Finally, the three types of victimization were compared with the six factors on the SVQ. There were no differences in scores on the SVQ based on whether the type of victimization was experienced by the individual with IDD.

## DISCUSSION

Conducted to gain insight concerning the social vulnerability of individuals with IDD, this study assessed relations of risk of vulnerability to demographic variables and the behavioral characteristics of individuals with IDD. Furthermore, to better document the variety of the types of victimization, we examined the forms of victimization reported about individuals with IDD. Five main findings arose from this study.

First, we developed a questionnaire to measure potential risk factors related to social victimization. The new measure of social vulnerability, the

SVQ, was comprised of six factors: Emotional Bullying, Risk Awareness, Social Protection, Perceived Vulnerability, Parent Protection, and Credulity. The scores on each of these six factors were related specifically to various demographic and behavioral characteristics. The creation of this measure addressed a gap in the literature on victimization—this is the first measure developed specifically to assess potential risk of social victimization for individuals with IDD. Scores on this measure can be used, along with other characteristics of the individual, to determine if the individual is at risk for victimization or has a greater potential to avoid victimization.

Second, scores on certain factors of the SVQ were most related to demographic characteristics of individuals with IDD. Individuals without ID and with higher education levels, more friends, and more independent living arrangements all scored lower on risk awareness and parental independence. These two factors seem to go hand in hand, as parents are likely more willing to allow independence if the individual displays behaviors related to risk awareness.

One would assume that when individuals are aware of risky situations, opportunities for exploitation are diminished. It is interesting, then, that these individuals still experienced victimization at rates similar to those who were less able to detect risk and were provided less parental independence. These results are consistent with evidence that, although individuals with IDD may be able to say what they should do in a risky situation, they are not always able to display the appropriate behavior in a real situation (Mechling, 2008). As individuals who are higher functioning are most likely to be in the community, it is important to teach self-protection skills to this group regardless of their ability to identify risk. To some extent, two models for this type of intervention might already be found in studies that teach women with ID to protect themselves from potentially abusive situations and studies that teach young adults with IDD to respond appropriately to lures from strangers (Fisher, 2011; Khemka, 2000; Khemka & Hickson, 2000; Khemka, Hickson, & Reynolds, 2005).

In the third finding, we expanded on the studies of Wilson and colleagues (Nettelbeck et al., 2000; Wilson & Brewer, 1992; Wilson et al., 1996) by using a standardized behavioral measure (CBCL) to determine whether vulnerability was related to behavioral characteristics of the individual with IDD. Different SVQ factors were related to behavior problems than those that were related to demographic characteristics. Consistent with the findings of Nettelbeck et al. (2000), this study found that those scoring highly on externalizing behavior problems were more highly rated on Emotional Bullying and Credulity. Thus, similar to previous research, individuals with IDD who are bullied display more externalizing behavior problems, which could potentially precipitate victimization (Khemka & Hickson, 2000; Rose, Espelage, & Monda-Amaya, 2010). Conversely, Emotional Bullying

and Credulity were related to higher levels of internalizing behavior problems. This finding is similar to Greenspan and colleagues (2001) suggestion that individuals who are chronically depressed may be more vulnerable to coercive efforts. These relationships could, however, also be the result of repeated exposure to victimization, thus leading to more internalizing behaviors.

Fourth, we used demographic characteristics and the total score on the CBCL to predict scores on the SVQ. The best predictors of social vulnerability were higher CBCL scores, not having friends, and having ID. These predictors should be kept in mind when conceptualizing risk for vulnerability. Fifth and finally, we examined examples victimization. Most caregivers provided explicit instances of when the individual with IDD was victimized. Such victimization fell into three distinct types: money/theft, teasing/persuasion, and abuse. These results are similar to previous findings of victimization experiences of individuals with IDD (Doren et al., 1996; Khemka & Hickson, 2000; Wilson & Brewer, 1992). Expanding on previous findings, these experiences extended over time, with some having occurred within days prior to completion of the questionnaire and others occurring in the individual's early childhood. Such examples showed the range of victimization experienced by individuals with disabilities rather than focusing on experiences that were most salient or recent. Furthermore, these examples support the notion that individuals with IDD are victimized throughout the life span.

This study has implications for both research and practice. In terms of research, our findings highlight the importance, nature, and correlates of social vulnerability. Going beyond interpersonal competence (Wilson et al., 1996), this study expands earlier research by using a standardized questionnaire to better understand how individuals with IDD are predisposed to social vulnerability by their demographic and behavioral characteristics. More detailed studies can now be performed to determine how specific aspects of each characteristic interact to increase the risk of social exploitation, and in which specific circumstances.

Armed with such information, future efforts might proceed in two directions: screening and intervention. As shown by the public health literature (Costello, Egger, & Angold, 2005), it is important to identify which specific characteristics put individuals most at risk for particular health or mental health problems. Now that we know that individuals with IDD display specific behaviors (e.g., aggression) that increase vulnerability, we can measure each individual's risk of victimization. Similarly, the SVQ questionnaire helps in understanding how interventions might proceed. If individuals with IDD are rated highly on the risk factors, then interventions can be designed to change these behaviors or to teach individuals how to react in potentially dangerous situations. Such self-protection skills would not only help individuals with IDD to be less vulnerable but they would also allow them to achieve greater independence.

Several limitations of this study must also be noted. First, as volunteers responding to announcements, the respondents could have been biased toward those who were extremely worried about individuals with IDD and their risk of exploitation. Second, although this study included over 100 respondents, we still have a relatively small number of participants for the number of items in the SVQ's factor analysis. Finally, responses to this research involved parent/caregiver report rather than firsthand reports from the individuals with IDD. Caregivers might not have accurately rated the individuals with IDD concerning certain behaviors related to vulnerability, or they might not have known about certain incidents of victimization.

Nevertheless, this study begins the process of understanding the social vulnerability of individuals with IDD. Individuals with IDD experienced exploitation related to money/theft, teasing/persuasion, and abuse. Also, whereas certain behavioral profiles seem related to increased vulnerability, other demographic characteristics may be related to an increased awareness of risky situations. Now that specific individual characteristics can be related to increased risk, interventions need to be developed to change certain behaviors as well as to teach individuals with IDD to evaluate situations and to take actions to protect themselves from victimization. Although a few programs have been developed to teach individuals to avoid sexual exploitation and strangers, more work now needs to be undertaken to protect individuals from money/theft and teasing/persuasion situations.

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