

Perceptions of Stress and Coping Strategies Among Adults With Mild Mental Retardation: Insight Into Psychological Distress

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Abstract

Stress, coping, perceptions of control, and psychological distress of 88 adults with mild mental retardation were assessed. Stressful interpersonal interactions and concerns over personal competencies occurred most frequently. Frequency and stress impact were positively associated with a composite score of psychological distress. Active coping was associated with less psychological distress than distraction or avoidant coping. Perceptions of control were positively related to active coping and negatively related to avoidant coping. Active coping was related to less psychological distress when used with perceptions of high control than with perceptions of low control. Decreasing opportunities for stress and increasing accurate perceptions of control and subsequently active coping may reduce psychological distress among people with mild mental retardation.

The experience of stress among the general population has received considerable attention; however, perceptions of stress among people with mental retardation has only recently been documented (Bramston & Bostock, 1994; Bramston, Fogarty, & Cummins, 1999; Fogarty, Bramston, & Cummins, 1997). People with mild mental retardation report similar overall rates of stress and perceive stress from the same types of events as does the general population (Bramston & Bostock, 1994; Bramston et al., 1999). However, researchers have found that they report a greater prevalence and greater impact of stress surrounding negative interpersonal experiences, suggesting a vulnerability to interpersonal stressors (Bramston et al., 1999; Fogarty et al., 1997).

Within the general population, a positive relationship between perceptions of stress and psychopathology has been well-established in cross-sectional and longitudinal research (e.g., Almeida, Wethington, & Kessler, 2002; DeLongis, Folkman, & Lazarus, 1988; Sandler, Tein, & West, 1994). Major life events as well as the cumulative

impact of daily hassles have been shown to be related to increased psychological problems (e.g., Beasley, Thompson, & Davidson, 2003; Chamberlain & Zika, 1990; Tennant, 2002). Perceptions of stress have also been associated with psychological distress among people with mental retardation. In retrospective studies, researchers have found a relationship between past experiences of major life events and psychiatric problems among such adults (Ghaziuddin, 1988; Hastings, Hatton, Taylor, & Maddison, 2004). Lunskey (2003) reported that perceptions of stress were related to symptoms of depression among adults with borderline to moderate intellectual disabilities. In addition, Lunskey and Havercamp (1999) investigated behaviors associated with high levels of social strain, defined as *interpersonal stress*, among people with mental retardation (IQ 40 to 70). They found that social strain, as rated by staff, was positively correlated with participants' depressive symptoms. Further, social strain, as perceived by participants, predicted depressive symptoms and somatic complaints that were evident 6 months later (Lunskey & Benson, 2001).

Although very little is known about how adults with mild mental retardation cope with stress, there is a growing body of research addressing the coping strategies of typically developing children and adolescents (e.g., Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Gonzales, Tein, Sandler, & Friedman, 2001; Sandler et al., 1994). Given the similar developmental level of adults with mild mental retardation and typically developing children and adolescents, this body of research can provide insight into the coping strategies of adults with mild mental retardation.

There is no universally accepted conceptualization of coping strategies; however, several researchers have endorsed three key dimensions of children's coping (Ayers, Sandler, West, & Roosa, 1996; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000): (a) efforts aimed at gaining control over the stressful situation or over one's emotions, often referred to as *active coping*; (b) efforts aimed to distract from the stressful situation through positive thoughts and positive activities, commonly termed *distraction coping*; (c) efforts aimed at avoiding or disengaging from the stressful situation or one's emotional experience, typically defined as *avoidant coping*. Previous research has shown that people with intellectual disabilities ranging from mild mental retardation to borderline intelligence can identify and describe their coping efforts (Jahoda, Pert, Squire, & Trower, 1998; Wayment & Zetlin, 1989) and that their coping strategies can be coded into categories resembling active and avoidant coping (Wayment & Zetlin, 1989).

Within typically developing child and adolescent coping research, active distraction and avoidant strategies have varying associations with psychological distress (e.g., Gonzales et al., 2001; Langrock, Compas, Keller, Merchant, & Copeland, 2002). Studies suggest that active coping strategies are associated with less psychological distress than distraction and avoidant coping strategies (e.g., Compas et al., 2001; Sandler et al., 1994). Although active coping is commonly found to be negatively correlated with internal and external psychological problems (e.g., Compas, Malcarne, & Fodacaro, 1988; Sandler et al., 1994), distraction coping has been shown to be positively correlated with aggression, depression, immaturity/hyperactivity, and delinquency (e.g., Compas et al., 1988; Compas, Worsham, Ey, & Howell, 1996; Plancherel & Bolognini, 1995), and

avoidant coping has been found to be positively correlated with clinical conditions, such as depression, anxiety, and conduct problems (e.g., Sandler, Tein, Mehta, Wolchik, & Ayers, 2000; Sandler et al., 1994). Other researchers, however, have not found active coping to always be more advantageous than avoidant or distraction coping (Gonzales et al., 2001).

One factor found to influence choice of coping strategy is perception of control (e.g., Compas et al., 1988; Langrock et al., 2002; Sandler, Kim-Bae, & MacKinnon, 2000). Children and adolescents who perceive a stressful event as controllable often choose active coping strategies in an attempt to alter the stressor or their emotions surrounding the stressor. Alternatively, children and adolescents who perceive a stressful situation as uncontrollable do not try to alter the stressor, but often choose distraction or avoidant coping strategies by using positive activities or thoughts to distract from the stressor or avoid both the situation and their emotions surrounding it (e.g., Forsythe & Compas, 1987; Gonzales et al., 2001).

Research also suggests that perception of control influences the association between coping strategies and psychological distress. When stressful events are perceived to be highly controllable, active coping strategies are often related to less psychological distress than when perception of control is low. Alternatively, distraction and avoidant coping strategies have been found to be related to less psychological distress when stressful events are perceived to be uncontrollable than when they are perceived as controllable (e.g., Forsythe & Compas, 1987; Langrock et al., 2002; Valentiner, Holahan, & Moos, 1994). However, other research has not consistently shown this effect of perception of control on the effectiveness of coping strategies, suggesting that this moderating effect may not be universal (e.g., Forsythe & Compas, 1987; Roberts, 1995; Terry & Hynes, 1998).

In the present study we extend current knowledge of stress and coping among people with mild mental retardation through (a) determining the daily and life events that are perceived as stressful and the frequency and stress impact of these events, (b) extending past research by investigating the relationship between stress and psychological distress among different categories of stressful events, (c) examining the relationship between coping strategies and psychological distress, and (d) determining whether perception of control influences choice of coping strategies and the asso-

ciation between coping and psychological distress for people with mild mental retardation. We predicted that (a) perceptions of stress would be positively related to psychological distress; (b) active coping would be related to less psychological distress than distraction or avoidant coping; (c) active coping would be used more with perceptions of high control, whereas distraction and avoidant coping were projected to be used more with perceptions of low control; (d) perception of control would moderate the relationship between coping and psychological distress, such that active coping would be related to less psychological distress when used with perception of high control; and (e) distraction and avoidant coping would be related to less psychological distress when used with perception of low control.

Method

Participants

Participants were 99 adults with mild mental retardation (IQs 55 to 70 and concomitant impairments in adaptive behavior), and adequate oral communication skills (i.e., orally communicate without the aid of another person). They were recruited from 13 disability service providers in the western United States. Eight participants were excluded because they were unable to meet the pretesting conditions outlined in the *Procedure* section. Another 3 participants were not included because they were not able to differentiate among levels of stress impact (i.e., reported the same stress impact for all stressors experienced) on the Lifestress Inventory. Of the remaining 88 participants, 52 were male and 36 were female. They had a range of reported etiologies, with the largest proportion being of unknown etiology. They ranged in age from 22 to 71 ($M = 39.4$, standard deviation [SD] = 12.1), and IQs were within the mild mental retardation range of 55 to 73 ($M = 61.2$, $SD = 5.7$). Eighty participants were Caucasian, 1 was African American, 4 were Hispanic, 2 were Asian, and the ethnicity of one participant was not reported. Forty-one percent of participants had one or more psychiatric diagnosis (26.1% had a depressive disorder; 11.4%, anxiety disorder; 8.0%, substance abuse; 6.8%, personality disorder; 6.8%, bipolar disorder; 5.7%, cognitive disorder; 5.7%, psychotic disorder; 4.6%, pedophilia; 3.4%, intermittent explosive disorder; 3.4%, adjustment disorder; 2.3%, schizophrenia; 1.1%, reactive attachment disorder; 1.1%, ADHD; 1.1%, enuresis;

and 1.1%, encopresis) in addition to mild mental retardation. Seventy-eight percent of participants had one or more physical conditions (primarily musculoskeletal, gastrointestinal, endocrine, and seizure disorders), causing at least some impairment in daily functioning. Forty-six participants lived in group homes; 25 participants, alone or with a roommate/partner; 3, with their families; and 14, with a host family. Seventy-eight participants were single, 2 were married, and 8 were divorced.

Measures

Demographics. Participant age, gender, impairments in adaptive behavior, IQ, mental health status (*DSM-IV* diagnoses on Axis I or II), and physical health over the past month were obtained from participants' primary disability service providers.

Stress. Stressful events were assessed through retrospective self-reports on the Lifestress Inventory (Fogarty et al., 1997). This scale contains 30 daily events or life situations that people with intellectual disabilities have reported to be stressful at varying times in their lives (Bramston & Bostock, 1994). Past exploratory and confirmatory factor analyses indicate that the scale reliably assesses three dimensions of stress: General Worry, $\alpha = .80$, Negative Interpersonal Relations, $\alpha = .78$, and Coping, $\alpha = .73$, and that this three-factor structure accounts for 27% of the total variance in the items (Bramston & Fogarty, 1995; Fogarty et al., 1997).: The General Worry factor includes stressors associated with meeting the expectations of others (e.g., items such as "Will you always be able to have/find a job?"). The Coping factor encompasses concerns about personal competencies and includes items such as "Do people think you can't do things when you think you can?" The Negative Interpersonal Relations factor includes negative experiences with others, such as being teased (Fogarty et al., 1997).

The Lifestress Inventory consists of a frequency rating and a stress impact rating. For the frequency rating (i.e., number of stressors experienced), participants indicated whether they have encountered the stressful situation described in each question in the past 2 weeks. To minimize response bias and acquiescence, half of the items are worded so that the stressful option is yes, and half are worded so that the stressful option is no. If participants have not experienced a particular stressor, a zero was recorded. For any stressor ex-

perienced, participants were asked to use a 4-point Likert scale to rate the severity of stress impact. In the present study one modification was made to the original Likert scale descriptors (i.e., *a fair bit* was changed to *medium*) to afford better understanding for a United States sample as opposed to the scale's original Australian sample. With the addition of this change, the Likert scale contains verbal descriptors (i.e., *no stress, a little, medium, and a lot*), numbers (i.e., 1 through 4), and a pictorial representation of a series of clear containers filled with varying amounts of water to visually guide participants' responses. Participants were also asked whether they have experienced other stressful events in the past 2 weeks not previously mentioned. The Lifestress Inventory has been shown to have good reliability and validity when given to people with Wechsler Intelligence Test IQs between 55 and 70; the scale has a Cronbach alpha coefficient of .84 when used as a global measure of stress, an interrater reliability of .87 for frequency and .79 for stress impact scores when participants were interviewed by two researchers, and a test–retest reliability over a 2-week period of .80 (Bramston & Bostock, 1994).

Coping strategies. Coping strategies were assessed through the sentence completion stem “When I have this problem, I ___.” This procedure is an adapted version of the word-stem task designed by Wayment and Zetlin (1989) and has been shown to successfully elicit coping efforts in adolescents with learning handicaps (Wayment & Zetlin, 1989) and adults with intellectual disabilities (Jahoda et al., 1998; Lunsy, 2003). A word-stem task was chosen over a questionnaire to avoid endorsement of socially desirable responses. Two undergraduate students who had been trained in accordance with criteria by Ayers, Sandler, Bernzweig, Harrison, Wampler, and Lustig (1989) independently coded the completed stems as active, distraction, or avoidant coping. Active coping included all efforts to gain personal control over the stressor or over one's emotional experiences. Distraction coping involved all efforts to adapt to the stressful situation through positive activities or thoughts. Avoidant coping included all efforts to avoid or disengage from the stressor or one's emotions. If multiple coping strategies were reported for a stressful event, all strategies were coded. Both coders were naive to the hypotheses of the study. Cohen's kappa revealed that an adequate interrater reliability of .74 was achieved. The ratio of active, distraction, and

avoidant strategies used in comparison to the total number of strategies reported was employed in all analyses.

Psychological distress. The Birlleson Depressive Short Form Self-Rating Scale, hereafter called the Depressive Self-Rating Scale, was used to evaluate depressive symptoms (Birlleson, 1981). The scale has 18 items and three response categories (*never, sometimes, and most of the time*). Benson and Ivins (1992) administered the scale to adults with mild mental retardation and found that the scale was significantly correlated, $r = .26$, with informant ratings of depressive symptoms. In the present study, the Depressive Self-Rating Scale had a mean of 27.28 ($SD = 5.65$). The Glasgow Anxiety Scale for People with Intellectual Disabilities, hereafter called the Anxiety Scale, a 27-item self-rating scale, was used to index anxiety. Mindham and Espie (2003) demonstrated that this scale had adequate internal consistency, $\alpha = .96$, criterion validity with the Beck Anxiety Inventory, $r_s = .75$, and a 4-week test–retest reliability of .95. In the present study, the Anxiety Scale had a mean of 45.20 ($SD = 9.07$). The Anxiety Scale and Depressive Self-Rating Scale were moderately correlated, $r = .49$, $p < .001$. A composite measure of psychological distress was created by summing the z scores of the Depressive Self-Rating Scale and the Anxiety Scale. In support of the validity of this composite measure, there was a trend for participants with a psychiatric diagnosis to have higher psychological distress scores than did participants without a psychiatric disorder, $t(76) = -1.78$, $p = .079$.

Perception of control. Participants used a 4-point Likert scale to answer the question “Was that situation one that you could control or do something about?” for every stressful event endorsed on the Lifestress Inventory. The Likert scale contains words (i.e., *no control, a little, medium, a lot*), numbers (i.e., 1 through 4), and a pictorial representation of a series of clear containers filled with varying amounts of water to respond. A similar procedure has been successfully utilized with children who have cognitive abilities comparable to adults with mild mental retardation (Compas, Banez, Malcarne, & Worsham, 1991).

Procedure

Following receipt of informed consent from guardians, we told individuals the nature, purpose, and requirements of the study; only those who voluntarily agreed to participate were included.

Participants were reminded that their responses would be held in strict confidentiality and that they could withdraw from the study at any time.

Researchers have found that people with intellectual disabilities demonstrate response biases due to social desirability, limited cognitive abilities, and restricted communication abilities (e.g., Heal & Sigelman, 1995). A pretest procedure was used to decrease the potential for response biases through ensuring that all participants understood the meaning of the term *stress* and could reliably differentiate between levels of stress impact. In the first step of the pretest, a definition of *stress* was provided: “Stress happens when you feel that you may not be able to handle a problem.” Participants were given the opportunity to ask questions about the meaning of stress, and all explanations were consistent with the Lazarus and Folkman (1984) transactional model of stress. They were asked to define stress in their own words. If participants were unable to provide a definition comparable to the one originally provided, discussion continued until participants correctly defined the term. If they were still unable to accurately define *stress*, they were excluded from the study.

The second step of the pretest was used to determine whether each participant could reliably use a 4-point Likert scale. This procedure was based on the Comprehensive Quality of Life Scale for individuals with intellectual disabilities (Cummins, 1993). In the first stage, participants were required to designate size–order relationships among a set of clear containers with varying amounts of water. During the second stage, participants had to relate the correct container to a written scale of size (*no, a little, medium, a lot*). Finally, participants, who had been previously asked to name their favorite and least favorite food item, were required to determine where their favorite and least favorite food item falls on a written scale of preference (*no, a little, medium, a lot*). Participants had to pass all three stages to be included in the study. Using this procedure, Cummins (1996) found that people with mild to upper-moderate levels of intellectual disability can respond to a Likert-type scale with adequate 2-week test–retest reliability, $r = .87$, and internal reliability, $\alpha = .68$.

A doctoral graduate student administered the Lifestress Inventory to participants at the headquarters of their primary disability service provider or at their residence. Questions were repeated or reworded if necessary, and the prompt “Tell

me more about it” was used to clarify responses. If requested, a staff member from the participants’ primary disability service provider was present during interviews; however, staff did not assist the participant in responding.

For every positive response indicating the presence of a stressor on the Lifestress Inventory, participants were asked to complete the word stem “When I have this problem, I ___.” The word-stem task was only used for stressful events experienced in the preceding 2 weeks. If participants were confused or did not describe how they coped with the problem, we read a modified statement from the Children’s Coping Strategies Checklist Program for Prevention Research (1991): “People do different things to solve their problems or to make themselves feel better. What do you do when you have this problem?” The probing question “Tell me more about it” was used to seek further information when needed.

The Depressive Self-Rating Scale and Anxiety Scale were read aloud, and participants could refer to the pictorial representations (i.e., clear containers filled with water) when responding. Participants were debriefed regarding the purpose of the study, thanked, and given the opportunity to ask the interviewer questions about the study. They were referred to their primary disability service provider to discuss stress in their life or any distress they experienced from participating in the study. The duration of the entire procedure was 45 to 55 minutes per participant.

Results

Demographic Correlates of Psychological Distress

Correlations among demographic variables (gender [0 = male, 1 = female], age [years], ethnicity [0 = Caucasian, 1 = non-Caucasian], marital status [0 = not married, 1 = married], IQ [standard score], and physical health [number of physical illnesses]) and psychological distress (composite score) were calculated. The only demographic variable significantly correlated with psychological distress was age. Pearson correlations indicated that age was significantly correlated with psychological distress, $r = -.32$, $p = .005$, such that younger participants had higher psychological distress scores.

Frequency and Stress Impact of Stressful Events

The average number of stressful events experienced was 10.53 ($SD = 3.06$), and the mean rating of stress impact was 2.84 ($SD = 0.35$). Table 1 presents the percentage of participants who reported experiencing stressful events on the Lifestress Inventory and the mean stress impact for these events. The three most frequent stressful events, occurring in more than half the sample, were wishing you could do things better or more quickly, hearing others argue, and people making you feel as though you are different from others. Thirty-nine participants (44%) reported experiencing additional stressful events not addressed on the Lifestress Inventory. Common themes in these additional stressors included doctor/dentist visits, temporary or chronic physical illness, holidays, sharing attention/possessions with others, and needing help. The stressful events with the highest mean stress impact were getting along with supervisor/staff, relationship with family, and choosing what to do with free time.

Table 2 presents the means and SD s for frequency and stress impact of General Worry, Negative Interpersonal Relations, and Coping with stressful events. One-way repeated measure analyses of variance (ANOVA) indicated a significant difference in frequency, $F(2, 86) = 24.55, p < .001, \eta_p^2 = .363$) but not stress impact of General Worry, Negative Interpersonal Relations, and Coping stressful events. Bonferroni-corrected paired-samples t tests indicated that Negative Interpersonal Relations, $t(87) = -6.76, p < .001$, and Coping stressors, $t(87) = -5.07, p < .001$, had a higher frequency than General Worry stressors. There was not a significant difference in frequency between Coping and Negative Interpersonal Relations stressors. Correlations among demographic variables and frequency and stress impact of General Worry, Negative Interpersonal Relations, and Coping were conducted. The only significant finding was a tendency for women to report greater stress impact on Negative Interpersonal Relations stressors than did men, $r = .26, p = .015$.

Stress Impact and Psychological Distress

The remaining analyses pertain only to stress impact given that the associations between stress frequency and psychological distress closely parallel those of stress impact. Based on Fogarty et al. vs. suggestion (1997), we re-scored stress impact

ratings for the rest of the analyses. Fogarty et al. employed a Rasch analysis and found that the distances between stress impact response categories are more even if the categories 0 (*not experienced*) and 1 (*experienced but not stressful*) are combined. This results in a stress impact rating in which events that were not experienced or experienced but not stressful are scored 0; events perceived to have a little stress, 1; events perceived to have medium stress, 2; and events with a lot of stress, 3.

To test the prediction that perception of stress is positively correlated with psychological distress, we conducted a Pearson product-moment correlation between overall stress impact and psychological distress. Results indicated that stress impact was positively correlated with psychological distress, $r = .53, p < .001$. Hierarchical multiple linear regressions indicated that stress impact remained significantly predictive of psychological distress independent of age, partial correlation $r = .41$.

Stress Impact Among the Categories of Stressful Events and Psychological Distress

We conducted Pearson correlations between overall stress impact of General Worry, Negative Interpersonal Relations, and Coping stressors and psychological distress. Stress impact of General Worry stressors, $r = .35, p = .002$, Negative Interpersonal Relations stressors, $r = .46, p < .001$, and Coping stressors, $r = .31, p = .004$, were positively correlated with psychological distress. Hierarchical multiple regressions indicated that stress impact of General Worry, partial $r = .41$, Negative Interpersonal Relations, partial $r = .47$, and Coping, partial $r = .36$, stressors continued to predict psychological distress at a similar magnitude when controlling for age.

Relative Use of Active, Distraction, and Avoidant Coping

The majority of participants (69.3%) reported using all three types of coping strategies to deal with stressful events, and only a small number (4.5%) reported using only one type of coping strategy. The relative use of active, distraction, and avoidant coping was determined by calculating the use of each strategy in comparison to the total number of strategies employed across all stressors. A Friedman nonparametric test indicated a significant difference among the relative use of active, distraction, and avoidant coping, $\chi^2(2, 88) =$

Table 1. Participants Reporting Stressful Events (%) on the Lifestress Inventory and Mean Stress Impact of These Events

Stressful event	%	Stress impact	
		Mean	SD
Do you wish you could do things better or quicker? ^a C	62.50	2.89	1.15
Have you heard people you know arguing? ^a NIR	60.20	2.93	1.21
Do people make you feel as though you are different from others? ^a C	51.10	2.84	1.12
When you are busy, do people get in the way or interrupt you? ^a NIR	45.50	2.76	1.14
Has someone you know been seriously ill or died? ^a NIR	45.50	3.00	1.20
Do you have a partner/girlfriend/boyfriend? ^b NIR	43.20	3.11	1.12
Have you ever been in a difficult situation where you didn't know what to do? ^a C	43.20	2.26	1.03
Do people stop you from doing things when you think you can do them? ^a C	39.80	2.90	0.99
Do people listen to what you say? GW, NIR	39.80	3.05	1.17
Have you had any arguments with anyone? ^a NIR, C	38.60	2.95	1.0
Can you handle your own money and budgeting? GW	34.10	2.91	1.30
Have you recently been in a place with lots and lots of people? ^a NIR	33.00	2.22	1.31
Do people make you do things you don't really want to do? ^a GW	29.50	3.00	1.22
Do you get along with your family? C	28.40	3.27	1.79
Can people understand you when you speak to them? C	28.40	3.04	1.07
Can you understand instructions or directions from others? C	27.30	2.96	1.10
Do people tease you or call you names? ^a NIR	25.00	3.11	1.19
Can you usually do the things people want you to do? GW, C	19.30	2.38	1.50
Do people around you let you know what's going on? GW	19.30	2.29	1.30
Does anyone bully or hurt you? ^a NIR	18.20	3.11	1.02
Will you always be able to have/find a job? GW, C	17.00	2.48	1.25
Are you allowed to do what you want to do in your free time? GW	17.00	3.25	1.00
Do you get to choose things that are important to you? GW	17.00	2.52	1.08
Have you been in trouble lately? ^a NIR	12.50	2.63	1.89
Do you get along with your supervisor/staff?	12.50	3.55	0.82
Do you like living where you live at the moment? GW	10.20	3.08	1.16
Do people like talking to you? GW	9.10	2.23	1.64
Do you get enough privacy/time to yourself? GW	9.10	3.22	1.09
Do you have enough friends? GW	8.00	2.55	1.37
Can you get enough help when you want or need it? GW	6.80	2.56	1.33

Note. Stress impact value represents original scores. GW = general worry, NIR = negative interpersonal relations, C = Coping. One item did not factor into any of the dimensions of stressful events.

^aPositive response means presence of stressor. ^bPositive or negative response may mean presence of stressor.

78.81, $p < .001$. Bonferroni-corrected Wilcoxon related-samples comparisons indicated that relative use of active coping was greater than the relative use of avoidant coping ($M = .25$, $SD = .19$),

$z = -6.41$, $p < .001$. Relative use of active coping was also greater than the relative use of distraction coping ($M = .18$, $SD = .16$), $z = -7.46$, $p < .001$. There was no significant difference in the relative

Table 2. Type of Stressor by Stress, Coping, and Perception of Control

Index	Type of stressor					
	General worry		Negative interpersonal relations		Coping	
	Mean	SD	Mean	SD	Mean	SD
Stress						
Frequency	3.03	1.97	4.67	1.61 ^a	4.16	1.58 ^a
Stress impact	1.69	0.98	1.77	0.78	1.88	0.77
Coping						
Active	0.63	0.34 ^b	0.50	0.28	0.65	0.28 ^b
Distraction	0.17	0.25	0.18	0.21	0.16	0.21
Avoidant	0.21	0.29	0.29	0.26 ^{a,c}	0.17	0.21
Perception of control	2.22	0.86	2.30	0.77	2.46	0.81

Note. Stress impact value represents re-scored value (i.e., *not experienced* and *experienced but not stressful* categories combined). ^aSignificantly different from General Worry. ^bSignificantly different from Negative Interpersonal Relations. ^cSignificantly different from Coping.

use of avoidant and distraction coping. Correlations among demographic variables and relative use of active, distraction, and avoidant coping were conducted. There were no significant correlations.

To determine whether people with mild mental retardation utilize different coping strategies for different types of stressful events, we conducted one-way repeated measure ANOVAs for relative use of active, distraction, and avoidant coping among General Worry, Negative Interpersonal Relations, and Coping stressors. Table 2 presents the means and SDs of each coping strategy. The relative use of active coping, $F(2, 67) = 9.27, p < .001, \eta_p^2 = .26$, significantly differed among General Worry, Negative Interpersonal Relations, and Coping stressful events. Bonferroni-corrected paired-samples t tests revealed that active coping was significantly higher for General Worry than for Negative Interpersonal Relations stressors, $t(79) = 3.53, p = .001$. Active coping was also significantly higher for Coping stressors than for Negative Interpersonal Relations, $t(68) = 3.48, p = .001$. There was no significant difference in the relative use of active coping among General Worry and Coping with stressful events.

A one-way repeated measure ANOVA indicated that the relative use of avoidant coping, $F(2, 67) = 8.00, p = .001, \eta_p^2 = .19$, significantly differed among General Worry, Negative Interpersonal Relations, and Coping with stressful events. Bonferroni-corrected paired-sample t tests revealed

that avoidant coping was significantly higher for Negative Interpersonal Relations than for General Worry stressors, $t(70) = -2.51, p = .014$, and Coping stressors, $t(80) = -3.84, p < .001$. There was not a significant difference in relative use of avoidant coping between General Worry and Coping with stressful events. A one-way repeated measure ANOVA revealed no significant difference in the relative use of distraction coping among General Worry, Negative Interpersonal Relation, and Coping stressors.

Association Between Coping Strategies and Psychological Distress

Correlations were used to determine whether relative use of active, distraction, and avoidant coping strategies was associated with psychological distress. Relative use of active coping was negatively correlated with psychological distress, $r = -.21, p = .05$. Relative use of avoidant coping and distraction coping was not significantly correlated with psychological distress. Multiple linear regressions indicated that relative use of active coping predicted psychological distress independent of age, partial $r = -.24$.

Perception of Control

Table 2 presents means and SDs of perception of control for General Worry, Negative Interpersonal Relations, and Coping stressors. A one-way repeated measure ANOVA indicated no signifi-

cant differences in perception of control among General Worry, Negative Interpersonal Relation, and Coping stressors. Pearson correlations revealed that overall perception of control was not significantly related to the relative use of active, distraction, or avoidant coping.

The fact that perception of control varies among individual stressful events within each dimension of stress (General Worry, Negative Interpersonal Relation, and Coping) has implications for understanding the influence of control appraisals on choice of coping strategy. Amalgamating perception of control across stressful events for each dimension of stress may not capture the true effect of control appraisals on choice of coping strategy. Therefore, perception of control for the single stressful event identified as having the highest stress impact and relative use of active, distraction, and avoidant coping for that single stressful event were assessed. Use of the stressful event with the highest stress impact to examine perception of control is consistent with past research (Compas et al., 1988; Forsythe & Compas, 1987; Park, Folkman, & Bostrom, 2001). If more than one stressful event had the highest stress impact, one of these events was randomly selected. Kendall's Tau *C* correlations indicated a significant positive relationship between perception of control and relative use of active coping, $r = .27$, $p = .004$, and a significant negative relationship between perception of control and relative use of avoidant coping, $r = -.14$, $p = .046$, for the stressful event with the highest stress impact. There was no significant relationship between perception of control and distraction coping.

Perception of control as a moderator of the effect of coping on psychological distress. A moderation model was used to test the prediction that active coping employed with perception of high control would be associated with less psychological distress than when used with perception of low control. Hierarchical multiple linear regressions were conducted in which demographic variables significantly associated with psychological distress were entered, then overall relative use of active coping, overall perception of control, and the interaction of Perception of Control \times Active Coping was entered. A multiple linear regression indicated that this interaction was significant, $\beta = -3.63$, $t(75) = -2.22$, $p = .030$, for psychological distress. We conducted a simple slope analysis (Aiken & West, 1991) to assess the magnitude of the slopes when psychological distress was regressed on age,

active coping, and perception of control at one *SD* above and below the mean of perception of control. Regressions revealed that when perception of control was low (one *SD* below the mean), active coping was not a significant predictor of psychological distress. However, when perception of control was high (one *SD* above the mean), active coping was a significant predictor of psychological distress, $\beta = -3.76$, $t(68) = -2.83$, $p = .006$. This supports the hypothesis that active coping is more optimal when used with perception of high control than with perception of low control.

We also used hierarchical multiple linear regressions to test the prediction that distraction and avoidant coping used with perception of low control would be associated with less psychological distress than when used with perception of high control. There was no significant interaction between overall perception of control and overall relative use of distraction coping for psychological distress. Similarly, there was no significant interaction between overall perception of control and overall relative use of avoidant coping on psychological distress.

Discussion

People with mild mental retardation experience stress in a variety of daily and life events. Stressful events reported to occur most frequently were Negative Interpersonal Relations stressors and Coping stressors. This finding parallels previous research indicating that people with mild intellectual impairments have a vulnerability to stress surrounding negative interactions with others (Bramston et al., 1999; Fogarty et al., 1997; Lunsy & Benson, 2001). Results of the present study suggest that this vulnerability may be indicative of an increased frequency with which these events occur. Negative interactions with others were not perceived to have greater stress impact than were other categories of stressful events. Results also suggest that concerns about personal competency may be equally problematic in terms of the frequency with which these events are experienced.

This vulnerability to Negative Interpersonal Relations and Coping stressors may stem from the fact that people with mild mental retardation often remain under the care of family/healthcare staff, which may mean little privacy, restricted autonomy, and limited opportunity to curtail stress-

ful interpersonal situations. They may also lack the social, emotional, and communication skills necessary to evoke or reciprocate supportive interactions at their workplace and/or residence. In addition, the intellectual, social, and physical impairments of people with mild mental retardation separate them from the typically developing population, and these differences may cause heightened concern over personal competencies.

The experience of stressful events is associated with psychological distress among people with mild mental retardation. As predicted, those who perceived greater intensities of stress had more symptoms of depression and anxiety than individuals who perceived less stress impact, even after controlling for relevant demographic variables. In the present study, we extend prior research by showing that stressful events other than negative interactions with others, such as general worries and concerns about personal competencies, are also related to increased psychological distress.

Coping appears to play an important role in understanding the effects of stress on the psychological distress of people with mild mental retardation. As predicted, people with mild mental retardation who reported using more active coping reported less psychological distress than those who reported using fewer active coping strategies. This relationship remained even after we controlled for relevant demographic variables. Across all stressors, people with mild mental retardation reported using active coping strategies more frequently than distraction or avoidant strategies. However, the relative use of coping differed depending on the category of stressful events. Although active coping was greatest for General Worry and Coping stressful events, avoidant coping was greatest for Negative Interpersonal Relation stressful events.

These results suggest that individuals with mild mental retardation may have particular difficulty coping adaptively with Negative Interpersonal Relation stressors. The high rates of avoidant coping and low rates of active coping indicate that adaptive coping strategies (i.e., strategies negatively related to anxiety and depression) are used least often with this category of stressors. Thus, in addition to supporting previous findings (Bramston et al., 1999; Fogarty et al., 1997; Lunskey & Benson, 2001) that Negative Interpersonal Relations stressors are experienced often, our results suggest that people with mild mental retardation are also vulnerable to negative interactions with

others because they are less likely to use adaptive coping strategies. Individuals with mild mental retardation may not be given the opportunity to choose with whom they interact nor have the option of limiting negative interpersonal situations. The high rate of avoidant coping may reflect wise decisions to not actively attempt to modify an uncontrollable situation. However, the high rate of avoidant coping also suggests a lack of an attempt to actively regulate emotions, an active coping strategy that may be effective even in uncontrollable situations. Future researchers should address these possibilities.

As hypothesized, active coping was more likely in stressful events appraised as controllable, and avoidant coping was more likely in stressful events appraised as uncontrollable. However, distraction coping was not significantly related to perceptions of control. This may mean that attempts to foster effective coping among people with mild mental retardation are contingent upon increasing perceptions of control. However, this strategy will only be effective for situations that are realistically modifiable. In the future researchers will need to determine how accurate people with mild mental retardation are at appraising the controllability of their environment and identify situations misperceived as uncontrollable.

There was some evidence suggesting that perception of control moderates the relationship between coping and psychological distress. Active coping had a significant negative relationship with psychological distress when used with perception of high control but not when used with perception of low control, suggesting that active coping is related to less psychological distress when used with appraisals of high control.

There are several methodological limitations to the present study. Perception of control is only one factor involved in the process of stress and coping. Many other variables (e.g., social support) also influence choice of coping strategy and the relationship between coping and psychological distress. In addition, the present study is representative of adults with mild mental retardation residing in the western United States and, therefore, may not be indicative of adults with mild mental retardation in other regions. However, results from the present study are consistent with findings from an Australian sample of adults with mild intellectual disabilities (Bramston et al., 1999). Our participants and the Australian sample of adults with mild intellectual disabilities report

ed similar stressful events as being frequently experienced and as having the highest stress impact. Finally, in the present study we restricted our assessment of psychological distress to a composite measure of self-reported depression and anxiety. Other measures of psychological distress could be employed to clarify the specific emotional and behavioral problems associated with stress and coping.

In the present study we assumed that the coping strategies reported by participants accurately captured the coping strategies actually employed in real life situations. Confidence in these results would be increased by directly observing individuals undergoing daily and life stress to ensure the strategies reported are actually the strategies used. Most importantly, we employed a correlational methodology to investigate the relationship among stress, coping, and psychological distress. Using this methodology, we could not determine whether stress and coping strategies directly influence psychological distress. Future researchers could address both uni-directional causality and bi-directional interacting pathways among stress, coping, and psychological distress.

Our results have several implications for disability service providers. First, efforts to educate people with mild mental retardation and their caregivers about common stressful situations may decrease opportunities of experiencing stress. Second, teaching active coping strategies that effectively modify stressful situations or emotions surrounding stressors will strengthen the ability of adults with mild mental retardation to adaptively cope with stress. Third, perception of control is related to the use of active coping, which is associated with less psychological distress. Aiding individuals with mild mental retardation to accurately appraise control over modifiable events may increase their use of active coping. In addition, encouraging the use of active coping strategies that modify emotions surrounding stressful events when events themselves are not modifiable may be beneficial. Through both decreasing the frequency of stressful events and increasing adaptive coping, providers may be able to decrease the psychological distress of people with mild mental retardation.

Future researchers should identify whether there are differences in perceptions of control between types of stressful events and investigate the ability of people with mild mental retardation to accurately appraise control over events. In addition,

research within the typically developing population suggests that perceptions of control are related to psychological distress. Future researchers should determine whether perceptions of control have similar associations among people with mild mental retardation. Research is also needed to investigate the effectiveness of different types of active, distraction, and avoidant coping strategies. *Coping flexibility*, or the ability to use a variety of coping strategies that fit the specific needs of unique situations, may also be important to understanding psychological distress.

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