


Relationships Between Cognitive Strategies of Adolescents and Depressive Symptomatology

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Nadia Garnefski,¹ Sabine Boon, and Vivian Kraaij

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The objective of the present study was to examine relationships between cognitive emotion regulation strategies and depressive symptomatology across different types of life event. A sample of 138 secondary school students filled out a questionnaire. They were asked to indicate their most negative life event ever. On the basis of their answers, 3 types of negative life event were distinguished: loss, health threat, and relational stress experience. No relationship was found between type of negative life event and depressive symptomatology. Significant relationships were found between type of negative life event and the cognitive strategies self-blame and other-blame. Adolescents with a health threat experience scored higher on self-blame, while adolescents with a relational stress event scored higher on other-blame than the other groups. Significant relationships were also found between depressive symptomatology and the cognitive strategies self-blame, rumination, positive reappraisal, putting into perspective, and catastrophizing. No interaction effects were found between type of negative life event and cognitive strategies, suggesting that relationships between cognitive emotion regulation strategies and depressive symptomatology are consistent across different types of life event.

KEY WORDS: cognitive-coping; emotion-regulation; adolescents; depression.

INTRODUCTION

A significant relationship between the experience of negative life events and adolescent depression is relatively well established (Goodyer, 1990; Seiffge-Krenke, 1993). However, the amount of variance in maladjustment explained by the experience of stress alone has in general been relatively small (Compas, 1995). This has led to the widely accepted assumption that other factors play a role in the relation between stress and depression (Seiffge-Krenke, 2000). A growing body of studies suggests that the ways in which adolescents cope with stressful events influence the development of depression (Compas *et al.*, 1993).

The broad construct of coping includes among others the cognitive emotion regulation strategies the adolescent uses to handle the intake of emotionally arousing information (see Thompson, 1991). Large individual differences exist in the amount of cognitive activity and in the content of thoughts by means of which adolescents regulate their emotions in response to negative life experiences.

The influence of cognitive processes on emotional and behavioral responses has been acknowledged by many theories (Croyle, 1992). It has been shown that cognitive emotion regulation styles such as *self-blaming*, *catastrophizing*, and *rumination* play an important role in the relationship between the experience of negative life events and depressive symptomatology in adolescents (Garnefski *et al.*, 2001, 2002b; Kraaij *et al.*, 2003). These findings suggest that by using certain cognitive emotion regulation strategies, adolescents may be more vulnerable to developing psychopathology in response to negative life events or, the other way around, that by using other cognitive strategies, adolescents may more easily tolerate or master negative life experiences. Although this is important

¹Assistant Professor, Department of Clinical and Health Psychology, University of Leiden, The Netherlands. Received Ph.D. in Psychology at the University of Leiden, The Netherlands. Main focus of research is on cognitive emotion, regulation and emotional and behavioral problems of adolescents. To whom correspondence should be addressed at Department of Clinical and Health Psychology, University of Leiden, P.O. Box 9555, 2300 RB Leiden, The Netherlands; e-mail: garnefski@fsw.leidenuniv.nl.

information for a wide range of psychological interventions, there are some limitations. Until now, the concept of cognitive emotion regulation had been considered from a *style* perspective (e.g., Garnefski *et al.*, 2001, 2002c), assuming that people have stable cognitive preferences or styles across different types of life event. Important limitations of the style approach are that it ignores the question whether someone's cognitive style is indeed representative of all particular stress situations and that it oversimplifies the rich and varied kinds of thoughts or cognitions people may have in particular stressful events (Lazarus, 1999).

The question whether situational variability exists in the use of specific cognitive emotion regulation strategies or how cognitive strategies may vary in response to particular types of stressor, has not been answered yet. Therefore, it is not possible to draw conclusions about the functionality of specific cognitive emotion regulation strategies in specific stress situations. New studies should focus on questions such as whether strategies that are considered inadaptive in earlier studies are indeed inadaptive in all circumstances (Gross, 1999). Lazarus and others made a rough distinction between 3 types of psychological stress, i.e., loss, threat, and challenge. Loss is assumed to deal with loss that already has taken place, threat refers to harm or loss that has not yet occurred, but is possible or likely in the (near) future, and challenge refers to relational stress situations that, although difficulties stand in the way of gain, can be overcome with verve, persistence, and self-confidence (Lazarus, 1999). Negative life events dealing with loss, threat, or challenge greatly vary in for example aspects such as situational demands, (un)predictability, clarity of meaning, duration, and (un)familiarity. It may very well be true that a certain cognitive strategy that is highly inadaptive in one situation is not in another situation. According to Lazarus (1993) both the approaches to coping as a style and as a situation-specific process are essential in that they each address important aspect of the coping process.

In the present study, the concept of cognitive emotion regulation was considered from a situation-specific perspective. It was investigated whether or not the same cognitive emotion regulation strategies were of importance across different types of life event. Therefore, in the present study, cognitive emotion regulation strategies were studied in the form of a *specific* coping response to a specific stressful situation, i.e., the one that adolescents reported to be the most negative life event they had ever experienced. On the basis of the distinction of Lazarus (1999), 3 main types of negative life event were distinguished: loss events, threat events, and relational stress events. More specifically, first it was studied whether adolescents reporting the 3 different types of life event also differed

in their mean depression scores and in their mean scores on 9 specific cognitive emotion regulation strategies, i.e., self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and blaming others. It was expected that adolescents with a loss experience would report more thoughts of acceptance and catastrophizing than adolescents with other life experiences. In addition, it was expected that those with a threat experience would score higher on refocus on planning, positive reappraisal, and putting into perspective and that those with a relational stress experience would score higher on self- and other-blame and rumination than the other groups. Secondly, the relationship between the use of these 9 specific cognitive emotion regulation strategies and the reporting of depressive symptomatology was studied. On the basis of previous studies, it was expected that adolescents who scored higher on self-blame, rumination, and catastrophizing and lower on positive reappraisal would also have higher scores on depressive symptomatology (Garnefski *et al.*, 2002b, Kraaij *et al.*, 2003). Thirdly, to study whether these relationships were consistent across adolescents reporting different types of life event, it was tested whether an interaction effect existed between type of life event and specific cognitive strategies in the reporting of depressive symptomatology. As this had not been studied before, no specific hypotheses could be formulated. However, it was expected that relationships between cognitive emotion regulation strategies and depressive symptomatology would remain consistent across different types of life event (and no significant interaction effect would be found).

METHOD

Sample

Subjects were 129 adolescents (69 boys and 60 girls) from a secondary school in The Netherlands, ranging in age from 14 to 18 years ($M = 15.15$, $SD = 0.94$). Almost half of the subjects (47.3%) attended higher general secondary education and 52.7% preuniversity education. Most adolescents (86.0%) were living in two-parent families, 7.0% in single-parent families, and 7.0% were living in other home settings (foster home, with others, alone).

Procedure

The research was carried out on a state school in The Netherlands, by means of an anonymous, written questionnaire. Permission for the participation of students was obtained from the management team and the parents'

council. Six complete classes participated in the research. The students completed the questionnaire during regular school hours, in their own classroom. First, a short introduction to the research was given. Students were told that they were not obliged to participate and that they were allowed to skip a question when they preferred not to answer.² All students agreed to participate. A graduate psychology student was available to give instructions and answer questions. Total time used to complete the questionnaire was about 20 min. In total, 138 students completed the questionnaires. Nine students were left out of the analyses, either because they had not answered the question or because they had given an incomplete or unclear answer to the question as to what had been their most negative event. In total, 129 students were included in the present study.

Instruments

The questionnaire used in this study consisted of measures on depressive symptomatology, negative life events, and cognitive emotion regulation strategies. These measures are described in more detail below.

Negative Life Events

By an open-ended question, adolescents were asked to indicate which event they considered the “most negative event they had ever experienced in their lives.” Examples of events reported by the students were the death of a close relative, friend or pet, (chronic) illness, injury or a traffic accident, divorce, family quarrels, bullying, moving, and maltreatment.

As regards the reporting of their most negative life event, 3 categories of adolescents were distinguished, based on the distinction Lazarus (1999) and others had made between 3 types of psychological stress: (1) those who reported a loss experience as most negative life event. This category contained adolescents who reported for example the death of a close relative, friend or pet (loss experience); (2) those who reported a health threat experience as their most negative life event. This category exists of adolescents who reported for example the experience of (chronic) illness, injury or a traffic accident by themselves or by significant others (health threat experience

self or others); and (3) those who reported a relational stress experience as the most negative life event, i.e., reported negative experiences concerning the relationships with other people or animals, for example caused by divorce, family quarrels, bullying, moving, maltreatment, etc. (relational stress experience). Nine adolescents could not be assigned to 1 of these categories, either because they had not answered the question as to what had been their most negative event or because they had given an incomplete or unclear answer or because it was unclear to which of the subgroups the event had to be assigned. As regards the prevalence of these 3 categories of negative life events: “loss experience” was reported most often as negative life event ($N = 77$; 59.7%), followed by “relational stress experience” ($N = 30$; 23.3%) and “health threat experience self or others” ($N = 22$; 17.1%).

Depressive Symptomatology

Depressive symptomatology was measured by the depression subscale of the Symptom Checklist (SCL-90; Derogatis, 1977, Dutch translation and adaptation by Arrindell and Ettema, 1986). The depression subscale consisted of 15 items (one item, concerning loss of sexual interest was dropped, because of the age of the students), assessing whether and to what extent the adolescents report symptoms of depression. Depressive symptomatology was measured using a 5-point Likert scale, ranging from 1 (*not at all*) to 5 (*very much*). Individual scale scores were obtained by summing up the items belonging to the subscale (scores range from 15 to 75).

Previous studies reported α -coefficients ranging from 0.82 to 0.93 for this subscale. In addition, test–retest reliability was good and strong convergent validity was found with other conceptually related scales (Arrindell and Ettema, 1986). In the present sample, an α -coefficient of 0.92 was found.

Cognitive Emotion Regulation Strategies

To measure the specific cognitive strategies adolescents used in response to the experience of their most negative life event, the Cognitive Emotion Regulation Questionnaire (CERQ) was used (Garnefski *et al.*, 2001, 2002a). The CERQ is a 36-item questionnaire, consisting of the following 9 conceptually distinct subscales, each consisting of 4 items and each referring to what someone thinks after the experience of a threatening or stressful life event:

1. *Self-blame*, referring to thoughts of blaming yourself for what you have experienced.

²In contrast to some other countries, The Netherlands does not require formal informed consent to perform an anonymous self-report research. However, as the study included some sensitive measures (e.g., of depressive symptoms), students were given the explicit instruction that they had the opportunity to withdraw from participation at any moment of the study and/or to skip questions they were not willing to answer.

2. *Acceptance*, referring to thoughts of accepting what you have experienced and resigning yourself to what has happened.
3. *Rumination or focus on thought*, referring to thinking about the feelings and thoughts associated with the negative event.
4. *Positive refocusing*, referring to thinking about joyful and pleasant issues instead of thinking about the actual event.
5. *Refocus on planning*, referring to thinking about what steps to take and how to handle the negative event. It is the cognitive part of action-focused coping, which does not automatically imply that actual behavior will follow.
6. *Positive reappraisal*, referring to thoughts of attaching a positive meaning to the event in terms of personal growth.
7. *Putting into perspective*, referring to thoughts of playing down the seriousness of the event or emphasizing its relativity when compared to other events.
8. *Catastrophizing*, referring to thoughts of explicitly emphasizing the terror of an experience.
9. *Blaming others*, referring to thoughts of putting the blame of what you have experienced on others.

Cognitive emotion regulation strategies were measured on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). Individual subscale scores were obtained by summing up the scores belonging to the particular subscale or cognitive coping strategy (ranging from 4 to 20).

In general, the CERQ can be used in 2 different ways: (1) to measure someone's cognitive coping *style* across different types of life events (what adolescents *generally/usually* think after the experience of negative or unpleasant events); and (2) to measure someone's cognitive coping *strategies* associated with a specific life event (what adolescents *actually* think in response to a particular negative event).

The present study was aimed at the latter category, i.e., the use of *specific* cognitive coping *strategies* in response to a *specific* event. In the present study, the *specific* event referred to the event reported by adolescents as the most negative event ever experienced in their lives.

To assess the cognitive strategies adolescents reported in response to their most negative event, the following instruction was written down: *Everyone who experiences something unpleasant or negative responds to this in his or her own way. Keep in mind the event you have just described. The following questions are about what you*

think while remembering or keeping in mind this particular event. All items were stated in the present tense, referring to the current thoughts about the indicated events.

Research on cognitive *styles*, as measured by the CERQ, has shown that the subscales have good internal consistencies, with alphas ranging from 0.67 to 0.81 (Garnefski *et al.*, 2001, 2002a). Also in the present study, the subscales had good internal consistencies, with alphas ranging from 0.66 to 0.90.

Statistical Analysis

To study whether adolescents reporting the 3 different types of life event also differed in their depression scores, ANOVA (One-way Analysis of Variance) was performed. To study overall differences in the reporting of cognitive strategies between different types of life event, MANOVA (Multivariate Analysis of Variance) was performed, with "type of life event" as independent variables and the 9 cognitive emotion regulation strategies as dependent variables. The variable "type of life event" consisted of 3 categories: loss experience, health threat experience, and relational stress experience as most negative life event. The multivariate main effect of "type of life event" was tested by means of Wilks' λ . Bivariate differences were tested by means of ANOVA. To study the relationships between the 9 cognitive strategies and depressive symptomatology, MRA (Multiple Regression Analysis) was performed, with depressive symptomatology as dependent variable. The MRA was performed in 3 steps. In the first step, group membership (by means of dummy coding) was entered in order to control for the effect of type of life event and to be able to create interaction effects. In the second step, the 9 cognitive emotion regulation strategies were entered. In the third step, the interaction effects between the 9 strategies and type of life event were tested.

RESULTS

First, the relationship between "type of life event" and depressive symptomatology was tested by means of ANOVA and appeared to be nonsignificant ($F(2, 126) = 2.71$; $p = 0.07$).

Next, MANOVA was performed. There was a significant main effect for "type of life event," indicating an overall significant difference in the reporting of cognitive strategies between the 3 types of life event (Wilks' $\lambda = 0.63$; $F(18, 234) = 3.43$; $p = 0.000$). The corresponding means and standard deviations are presented in Table I.

Table I. Differences Between the 3 Types of Life Event in the Reporting of Cognitive Coping Strategies (ANOVA)

CERQ scales	Type of life event						<i>F</i> (2, 126)	<i>p</i>
	Loss experience (<i>N</i> = 77)		Health threat experience self or others (<i>N</i> = 22)		Relational stress experience (<i>N</i> = 30)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Self-blame	4.87	1.43	7.18	3.63	6.27	3.48	8.71	0.000
Acceptance	11.03	4.17	8.95	4.05	9.33	4.56	ns	
Rumination	7.66	3.04	6.95	3.58	7.77	4.10	ns	
Positive refocusing	12.17	4.57	12.73	5.38	10.43	4.21	ns	
Refocus on planning	7.57	2.92	8.50	3.42	7.80	3.48	ns	
Positive reappraisal	8.34	3.50	8.95	4.27	7.97	2.76	ns	
Putting into perspective	9.63	4.38	11.55	4.87	9.23	3.74	ns	
Catastrophizing	6.20	2.42	5.55	1.74	5.53	2.08	ns	
Blaming others	4.63	1.20	5.64	2.98	6.53	2.56	10.55	0.000

Significant bivariate differences were found for only 2 of the specific cognitive strategies, i.e., self-blame and other-blame. Health threat experiences provided the highest self-blame scores, whereas other-blame appeared to be most prevalent in relational stress experiences. Loss experiences showed both the lowest self-blame and lowest other-blame scores. No significant differences were found concerning the other strategies.

Subsequently, MRA was performed. To enter “type of life event” as a predictor, this variable was recoded into 2 dummy variables, with the first dummy contrasting loss events (coded: 1) with health threat and relational stress events (both coded: 0), and the second dummy contrasting relational stress events (coded: 1) with loss and relational stress events (both coded: 0). These dummy variables were entered into the regression analysis as the first block, to be able to control for type of life event and to create interaction terms (see for a detailed description of this method Aiken and West (1991)). Congruent with the ANOVA results, the effect of type of life event was nonsignificant ($R^2 = 0.04$; $F(2, 125) = 2.69$; $p = 0.072$).

The 9 cognitive strategies were entered as the second block. Together these strategies explained an additional 42.6% of the variance, yielding a significant contribution to the regression equation ($F_{\text{change}}(9, 116) = 10.32$; $p = 0.000$). Significant “predictors” of depressive symptoms were self-blame, rumination, positive reappraisal, putting into perspective, and catastrophizing (see Table II).

Next, the interaction effects between type of life event and cognitive strategies were tested. Because the sample size was too small to enter all interaction effects in 1 and the same analysis, they were tested in 9 separate analyses (1 for each cognitive strategy). None of the interaction effects added a significant amount to the variance.

Therefore, Table II shows the results of the MRA without interaction terms.

DISCUSSION

Adolescents that participated in this study were asked to indicate which specific life event they considered to have been their most negative life event ever. Subsequently they were asked which cognitive emotion regulation strategies they currently use when they think back of this event. On the basis of their answers 3 groups of students were distinguished: those indicating a loss experience, a health threat experience, and a relational stress experience. First

Table II. Relationships Between Cognitive Coping Strategies and Depressive Symptomatology: Multiple Regression Analysis

	Depressive symptomatology			
	R^2_{change}	β	<i>t</i>	<i>p</i>
<i>Block 1: Type of event</i>	0.04			
Dummy 1: Loss vs. health threat and relational stress		0.02	ns	
Dummy 2: Relational stress vs. loss and health threat		-0.16	ns	
<i>Block 2: Cognitive strategies</i>	0.43***			
Self-blame		0.19	2.23	0.028
Acceptance		-0.07	ns	
Rumination		0.45	4.24	0.000
Positive refocusing		0.04	ns	
Refocus on planning		-0.05	ns	
Positive reappraisal		-0.24	-2.53	0.013
Putting into perspective		0.22	2.33	0.021
Catastrophizing		0.32	3.55	0.001
Blaming others		0.05	ns	
<i>Total explained variance</i>	0.47***			

*** $p < .001$.

aim was to study whether differences existed between the cognitive strategies these 3 groups of adolescents used to regulate the emotions associated with the particular event. Second aim was to investigate the relationships between the use of specific cognitive emotion regulation strategies and depressive symptomatology and whether or not such relationships were consistent across the 3 groups of adolescents.

Significant differences were found between the 3 "types of life event" in the reporting of self-blame and other-blame. Hypotheses regarding these cognitive strategies were partly confirmed. Self-blame was reported least often to have been used as a cognitive coping strategy by adolescents with a loss experience and most often by adolescents with a health threat experience, while adolescents with a relational stress experience reported other-blame more often than the other groups. Hypotheses concerning differences in acceptance and catastrophizing were not confirmed.

The results also showed, that, after controlling for type of life event, a considerable percentage of the variance in the reporting of depressive symptomatology, could be explained by the use of specific cognitive emotion regulation strategies. More specifically, the cognitive strategies of self-blame, rumination, catastrophizing, and positive reappraisal showed significant relationships with the depression scores, confirming prior hypotheses. Adolescents with higher depression scores also reported more thoughts of putting into perspective. In addition, no interaction effects were found between "type of life event" and cognitive emotion regulation strategies on the reporting of depressive symptomatology. Thus, although the extent to which specific cognitive strategies were used differed between loss, health threat, and relational stress events, relationships between cognitive strategies and depressive symptomatology appeared to be consistent across the 3 "types of event," conform the expectations. The results suggest a strong relationship between a cognitive coping style of rumination and depressive symptomatology, fitting in with the findings of others (Garnefski *et al.*, 2001, 2002b; Nolen-Hoeksema *et al.*, 1994). Also the finding that catastrophizing is related to maladaptation is confirmed in the literature (Garnefski *et al.*, 2001; Garnefski *et al.*, 2002b; Sullivan *et al.*, 1995). In addition, a relationship was found between self-blaming and symptoms of depression. This also confirms other studies showing that an attributive *style* of putting the blame of what you have experienced on yourself is related to depression and other measures of ill-health (Anderson *et al.*, 1994; Garnefski *et al.*, 2001, 2002b). As regards the cognitive strategy of positive reappraisal, the opposite result was found: the more positive reappraisal, the less depressive symptoms

were reported. This finding has also been found in other studies (Carver *et al.*, 1989; Garnefski *et al.*, 2002b). Although the relationship between putting into perspective and depressive symptomatology was not expected, other studies had found this strategy to be an important issue in relation to well-being (Allen and Gilbert, 1995). The present result suggests that a cognitive strategy of playing down the seriousness of an event may not always be considered an adaptive strategy.

In general, the results of the present study are in agreement with earlier findings concerning the relationship between cognitive emotion regulation *styles* and symptoms of depression (Garnefski *et al.*, 2001, 2002b,c; Kraaij *et al.*, 2003). On the basis of the present study, the conclusion can be added that a relationship between these cognitive strategies and symptoms of depression holds across specific types of event. The same cognitive mechanisms appear to be at work in the reporting of psychopathology in adolescents with different types of most negative event. Although the use of specific cognitive strategies is shown to vary between specific types of life events, the type and directions of relationships between cognitive coping styles and depressive symptomatology appear to be rather consistent. The results show that some cognitive coping styles (such as self-blame, rumination, and catastrophizing) may be more maladaptive than others, and others more adaptive (positive reappraisal), regardless of the specific life event involved.

What are the possible implications of these results for prevention and intervention? One of the conclusions of a recent review study concerning the prevention of mental disorders in school-aged children was that it is best to direct preventive interventions at risk and protective factors rather than to categorical problem behaviors (Greenberg *et al.*, 2001). During the past decades a number of risk factors have been found to place an adolescent at increased risk for psychopathology, such as handicaps, developmental delays, emotional difficulties, family circumstances, interpersonal problems, poverty and school failure (Greenberg *et al.*, 2001). The present study has clearly shown that certain maladaptive cognitive strategies also form an important risk factor for psychopathology in adolescents, regardless of the type of life event involved. Important target for preventive interventions may therefore be to prevent general maladaptive cognitive coping strategies from turning into long-established and difficult-to-change styles by reducing nonadaptive strategies and acquiring more adaptive strategies.

A limitation of the design was that the assessment of depressive symptomatology, cognitive coping strategies, and negative life events had to be made on the basis of self-reported evaluations, which may have caused some bias.

For example, the results of this study may be an under- or overestimation of the extent to which cognitive coping strategies are applied in reality. In addition, we asked adolescents to indicate which life event they considered the “most negative event they had ever experienced.” Some of the indicated events might have occurred years ago, while others might have occurred only a few months ago. Although we explicitly asked the subjects to indicate the event that they currently considered to have been their most negative life event, still we cannot be sure about the question whether subjects offered events that they currently believe were stressful or that were perceived as stressful at the time of occurrence. This might have introduced a certain bias we were not able to control for, as it was not assessed when a certain event had occurred nor how stressful the event was perceived at the time of occurrence. Current life events, daily stressors or hassles were not assessed, despite the influence such experiences might have on current cognitive strategies and emotional well-being. Another limitation refers to the distinction between 3 types of life event: loss, threat, and relational stress events. It may be argued that categorizing life events might lead to a certain loss of information and that other—perhaps more specific—distinctions might show different results. It has been shown that studying differences in cognitive strategies in response to specific life events is of importance. However, in future research, daily stressors, hassles, recent life stress, and more event-specific characteristics should be included to test the specific questions under study.

Another limitation is that the results are based on cross-sectional data. Although a clear relationship has been shown between cognitive coping strategies and symptoms of depression and anxiety, the present study does not allow drawing conclusions about the directions of influence. Theoretically, it is just as likely that a certain cognitive coping strategy leads to emotional problems, as the other way around. Circular causal mechanisms may also be at work, which would make both assumptions true at the same time. Still, whatever the directions of influence may be: on the basis of the present study, it might be argued that the use of certain cognitive coping strategies could be an important indicator of serious disturbances. A strong point in this study is that, as far as we know, it is probably the first study to focus on the relationship between cognitive emotion regulation strategies and depressive symptomatology across specific negative life events. It was shown that cognitive strategies such as self-blame, rumination, and catastrophizing were related to depressive symptomatology, regardless of type of life event. The exploratory character of this study makes replication necessary. It is of importance to include current life events and

daily hassles and to use prospective designs to study the same research questions in future research. If our results can be confirmed, they may carry important implications for the focus and content of (preventive) interventions in adolescents.

REFERENCES

- Aiken, L. S., and West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Sage, Thousand Oaks, CA.
- Allen, S., and Gilbert, P. (1995). A social comparison scale: Psychometric properties and relationship to psychopathology. *J. Pers. Individ. Differ.* 19: 193–299.
- Anderson, C. A., Miller, R. S., Riger, A. L., Dill, J. C., and Sedikides, C. (1994). Behavioural and characterological styles as predictors of depression and loneliness: Review, refinement, and test. *J. Pers. Soc. Psychol.* 66: 549–558.
- Arrindell, W. A., and Ettema, J. H. M. (1986). *SCL-90, Handleiding bij een multidimensionele psychopathologie-indicator*. Swets & Zeitlinger B. V., and Lisse.
- Carver, C. S., Scheier, M. F., and Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *J. Pers. Soc. Psychol.* 56: 267–283.
- Compas, B. E. (1995). Promoting successful coping during adolescence. In Rutter, M. (ed.), *Psychosocial Disturbances in Young People: Challenges for Prevention*. Cambridge University Press, New York, pp. 247–273.
- Compas, B. E., Orosan, P. G., and Grant, K. E. (1993). Adolescent stress and coping: Implications for psychopathology during adolescence. *J. Adolesc.* 16: 331–349.
- Croyle, R. T. (1992). Appraisal of health threats: Cognition, motivation, and social comparison. *Cogn. Ther. Res.* 16: 165–182.
- Derogatis, L. R. (1977). *SCL-90: Administration, Scoring and Procedures Manual-I for the R(evised) Version*. John Hopkins University School of Medicine, Clinical Psychometrics Research Unit, Baltimore.
- Garnefski, N., Kraaij, V., and Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and depression. *Pers. Individ. Differ.* 30: 1311–1327.
- Garnefski, N., Kraaij, V., and Spinhoven, P. (2002a). *CERQ. Manual for the Use of the Cognitive Emotion Regulation Questionnaire: A Questionnaire Measuring Cognitive Coping Strategies*. DATEC, Leiderdorp, The Netherlands.
- Garnefski, N., Legerstee, J., Kraaij, V., van den Kommer, T., and Teerds, J. (2002b). Cognitive coping strategies and symptoms of depression and anxiety: A comparison between adolescents and adults. *J. Adolesc.* 25: 603–611.
- Garnefski, N., Van den Kommer, T., Kraaij, V., Teerds, J., Legerstee, J., and Onstein, E. (2002c). The relationship between cognitive emotion regulation strategies and emotional problems: Comparison between a clinical and non-clinical sample. *Eur. J. Pers.* 16: 403–420.
- Goodyer, I. M. (1990). Family relationships, life events and childhood psychopathology. *J. Child Psychol. Psychiatry Allied Discip.* 31: 161–192.
- Greenberg, M. T., Domitrovic, C., and Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prev. Treat.* 4.
- Gross, J. J. (1999). Emotion regulation: Past, present, future. *Cogn. Emotion* 13: 551–573.
- Kraaij, V., Garnefski, N., de Wilde, E. J., Dijkstra, A., Gebhardt, W., Maes, S., and ter Doest, L. (2003). Negative life events and depressive symptoms in late adolescence: Bonding and cognitive coping as vulnerability factors? *J. Youth Adolesc.* 32(3): 185–193.
- Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosom. Med.* 55: 234–247.

- Lazarus, R.S. (1999). *Stress and Emotion: A New Synthesis*. Springer, New York.
- Nolen-Hoeksema, S., Parker, L. E., and Larson, J. (1994). Ruminative coping with depressed mood following loss. *J. Pers. Soc. Psychol.* 67: 92–104.
- Seiffge-Krenke, I. (1993). Coping behavior in normal and clinical samples: More similarities than differences? *J. Adolesc.* 16: 285–303.
- Seiffge-Krenke, I. (2000). Causal links between stressful life events, coping style, and adolescent symptomatology. *J. Adolesc.* 23: 675–691.
- Sullivan, M. J. L., Bishop, S. R., and Pivik, J. (1995). The Pain Catastrophizing Scale: Development and validation. *Psychol. Assess.* 7: 524–532.
- Thompson, R. A. (1991). Emotion regulation and emotional development. *Educ. Psychol. Rev.* 3: 269–307.