Coping styles and emotional and behavioural problems among Norwegian grade 9 students

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ABSTRACT   *The main purpose of this study was to explore the relations between coping styles and emotional and behavioural problems among adolescent students. The study was conducted as a survey among a representative sample of 2006 Norwegian 9th graders. The results show that emotional problems are associated with self-blaming as well as aggressive coping. Off-task orientation was associated with little use of planning and frequent use of aggressive coping. Finally, aggressive coping was the main predictor of externalizing problems, with infrequent use of planning and frequent use of behavioural disengagement as other significant predictors.*

Key words: *emotional problems; behavioural problems; coping styles; school stress*

INTRODUCTION

Adolescence represents a crucial time in the development of the individual. It is a period characterized by a complex set of developmental demands that move the young person from childhood to young adulthood. Most children and adolescents adapt successfully, whereas some experience adjustment problems. Previous research suggests that coping skills are crucial for positive emotional and social development among young people (Humphrey, 1988; Elias, 1989; Ebata & Moos, 1995; Dumont & Provost, 1999). The ways of coping with stress that evolve during this period undoubtedly influence how the individual will deal with stress later in life (Werner, 1984; Newcomb, M.B. *et al.*, 1986; Patterson & McCubbin, 1987; Hess & Copeland, 1997). It is therefore important to learn more about coping among adolescents and how coping styles are related to emotional and behavioural adjustment. The main purpose of the present study is to explore the relations between coping styles and emotional and behavioural problems among adolescent students.

School stress

The school is an important arena for young people, but, unfortunately, schools can also be sources of stress because they provide a context in which performance as well as relationship demands are made (Forman & O'Malley, 1984). In fact, a number

of studies indicate that pressures and expectations within the school environment are the most frequent stressors reported by adolescents (Elkind, 1981; Sheridan & Smith, 1987; Armacost, 1989; Sears & Milburn, 1991). Specific school-related stressors include testing, grades, academic failure and achievement, competition, present and future performance and expectations and future goals. Adolescents also report interpersonal school-related stressors, such as conflicts with classmates and teachers (Newcombe M.B. *et al.*, 1986; Patterson & McCubbin, 1987; Sears & Milburn, 1991). Elias (1989) emphasized that for many students, and possibly an increasing number of them, the school setting may not provide the benign academic learning experience it is expected to. Lack of sufficient coping skills among children and adolescents to deal with stressors in school may in turn underlie emotional and behavioural problems at school, which seem to have increased in prevalence (Chazan *et al.*, 1994; Winkley, 1996; Nordahl & Sørlie, 1998).

Coping and adjustment

Coping in this study refers to both cognitive and behavioural efforts to ameliorate or overcome stressful demands, especially when a more automatic response is not readily available (Lazarus & Launier, 1978; Lazarus & Folkman; 1984). Coping behaviour is separated into different categories and one widely used framework classifies coping responses according to their function (Lazarus & Folkman, 1984; Lazarus, 1993). These functions are: to manage or alter the problem that is causing distress (problem-focused coping or active coping) and to regulate emotional responses to problems (emotion-focused coping).

In general we must be cautious when differentiating between effective and ineffective coping styles; one style can be effective in certain situations and ineffective in others, while the same style can be positive for one person and negative for another. Nevertheless, research indicates that some coping styles are generally more effective in order to reduce stress than others. Studies that have examined the relationship between coping styles and adjustment among adolescents have generally shown that emotion-focused coping, for example venting emotions and avoidance, is associated with emotional and behavioural problems, and that problem-focused or active coping is associated with positive academic and personal adjustment (fewer emotional and personal problems) (Tolor & Fehon, 1987; Ebata and Moos, 1991; Kliewer *et al.*, 1994; Seiffe-Krenke, 1995; Leong *et al.*, 1997).

Some coping styles are more relevant to a study in connection with school-related stress and emotional and behavioural problems. Research on children and adolescents indicates that behavioural problems could be related to poor social competence and problem-solving skills (Fischler & Kenndall, 1988; Ogden, 1995; Sørlie, 1998). Little use of problem-focused coping styles, such as planning, could be an indication of poor problem-solving skills. Moreover, previous research indicates that children and adolescents perceive seeking social support as one of the most helpful ways of coping with problems (Ryan, 1989; Frydenberg & Lewis,

1991). A good ability in seeking social support could therefore protect against emotional and behavioural problems. Self-blame is another coping style relevant to coping with school-related problems. Adolescence with its numerous and complex changes, together with increasing demands and expectations, particularly at school, may easily trigger uncertainty and a greater risk of blaming oneself for social and academic problems (Harter *et al.*, 1992). When individuals fail to succeed or have conflicts with others, they tend to blame themselves to different degrees, and too much self-blame when faced with problems at school could be a risk factor for emotional problems (Compas *et al.*, 1988; Endler & Parker, 1994; Sandler *et al.*, 1994). On the other hand, too little self-blame could indicate a poor ability to accept the perspective of others or a tendency to blame others instead of oneself when meeting problems and thus be a risk factor for externalizing problems (Graham, 1988; Dogde *et al.*, 1990; Rutter *et al.*, 1998).

Behavioural disengagement is a coping style reflecting the tendency of students to give in or reduce their efforts in difficult situations. If students give in easily when faced with problems at school, these problems are likely to persist. This situation may in time lead to a vicious circle of negative expectations, lowered efforts and the experience of failure, which in turn could result in behavioural problems. Effort and engagement in school are likely to be affected by the perceived value of schoolwork (see, for example, Eccles, 1983) and frequent use of behavioural disengagement as a coping style in school could signal that schoolwork provides little incentive for the individual. Assigning a low value to schoolwork could be associated with reduced respect for the school and the norms laid down to regulate student behaviour. Students that disengage in relation to schoolwork may therefore have a reduced threshold for displaying behaviour that does not accord with school norms, such as oppositional behaviour towards teachers and fellow students (Bru, in press).

Similarly, to deal with school-related stress through aggressive coping is likely to be ineffective as well as stress increasing (Lazarus, 1993). Previous research results indicate that aggressive coping is viewed as the least helpful coping strategy among adolescents (Ryan, 1989). In fact, this way of coping does not seem to solve any problems; on the contrary, it may lead to more problems or conflicts, with teachers as well as peers (see, for example, Newcomb, A. F. *et al.*, 1993). Such continuing problems may also have adverse effects on the psychological well-being of students. Students that react with aggressive responses to problems at school may also easily be met with sanctions or other negative responses from others, including teachers. This could lead to a situation where they receive less support than is actually needed, with a decrease in concentration and an increase in oppositional behaviour as a result. An aggressive coping style could also indicate an underlying emotional instability which could be a risk factor for both emotional problems and externalizing problems (Eysenck, 1982). It is therefore of interest to examine how aggressive coping is related to different forms of emotional and behavioural problems.

The present study aims to examine the associations between coping styles relevant to school-related stress and emotional problems, off-task orientation and externalizing problems among adolescent students. Given that few major studies have addressed how students' ways of coping with school-related stress are

associated with different forms of emotional and behavioural problems among a normal population of adolescent students, this study should also meet a more general need for research within the field of school/educational psychology.

METHOD

Subject sample

This study was conducted as a survey among a representative sample of 2006 Norwegian Grade 9 students. The sample of districts and schools is representative according to the Norwegian Central Bureau of Statistics standard for municipality classification (Statistics Norway, 1994). Of the respondents, 51% were female and 49% were male. The response rate was 86%. Respondents completed a questionnaire during a regular 45 minute classroom period with a teacher present. To ensure optimal completion of the questionnaire (including returns from dyslexic students), teachers read out each question. To avoid students influencing each other's responses, the questionnaires were administered, as far as possible, at the same time for each class in each school.

Measures

Emotional and behavioural problems. Emotional problems were assessed using seven slightly modified items from the Hopkins Symptom Checklist (Derogatis *et al.*, 1974; Bru *et al.*, 1998). Items for emotional problems had a four step scoring format with the following response categories: 'no complaints', 'mild complaints', 'moderate complaints' and 'severe complaints'. Off-task orientation and externalizing problems were assessed by two scales documented by our research institute (Thuen & Bru, 2000; Bru *et al.*, 2001). The scale for off-task orientation included four items, with a four step scoring format as follows: 'disagree strongly', 'disagree a little', 'agree a little' and 'agree very much'. Finally, externalizing problems was assessed on a scale including five items, with the following response categories: 'never', 'sometimes', 'weekly' and 'daily'. The dimensionality of items for assessing emotional and behavioural problems was tested by factor analysis. Please refer to Results regarding the results of this dimensionality testing and for further documentation of the scales used to assess emotional and behavioural problems.

Coping styles

Coping styles were assessed by subscales selected from the following established scales. (i) The COPE scale (Carver *et al.*, 1989): 'active coping', 'planning', 'seeking social support for instrumental reasons', 'seeking social support for emotional reasons' and 'behavioural disengagement'. (ii) A coping scale developed by Vitaliano *et al.* (1985): 'self-blame'. (iii) The 'Life Events and Coping Inventory' (Dise-Lewis, 1988): 'aggressive coping'. From this scale two items that were likely to overlap in content with items in the scale on externalizing problems were excluded. The items

for assessing coping styles had a four step scoring format identical to that used in the COPE scale: 'I usually don't do this at all', 'I usually do this a little bit', 'I usually do this a medium amount' and 'I usually do this a lot', indicating the frequency with which students use the different styles. The introduction to the coping scale was derived from the dispositional version of the COPE scale and focuses on how students usually cope with social and academic stress at school. The dimensionality of items assessing coping styles was tested by factor analysis.

Coping efforts are likely to be influenced by the level of stress. High levels of stress could therefore inflate the measures employed for coping styles. Variables assessing stress were therefore included as control variables. Different aspects of school-related stress were assessed by three single items. One item focused on academic stress, one on social stress in relation to peers at school and one on social stress in relation to teachers. The items assessed the degree of stress students had experienced during the previous month in relation to these sources of stress. The items had a six point scoring range from 'no stress' to a 'very high degree of stress'.

Procedures

The selected statistical tools were product–moment correlations, reliability testing (Cronbach's α), exploratory factor analysis, confirmatory factor analysis, multivariate multiple regression analysis and logistic regression. Statistical analyses were conducted using SPSS (Norusis, 2000) and AMOS (Arbuckle & Wothke, 1999). Dichotomy scores for dependent variables were constructed for use in logistic regression. These scores identified those with the 10% highest scores on the three different dependent variables. Scores for externalizing problems showed a skewed distribution. Scores for this variable were therefore transformed by a $\log_{10}$ logarithmic function before the regression analyses. Skewness and kurtosis after transformation were 1.65 and 3.33, respectively.

RESULTS

A combination of exploratory and confirmatory factor analyses was used to establish the measurement models for independent and dependent variables (see Tables I and II). Exploratory factor analyses implemented principal axis factoring and oblique rotation. Items from seven scales on coping styles were included in the present study. However, some of the scales (especially 'active coping'/'planning' and 'seeking social support for emotional reasons'/'Seeking social support for instrumental reasons') could overlap conceptually. Exploratory factor analyses allowing for five to seven factors were therefore explored. The five factor solution, combining the scales 'planning' and 'active coping' as well as the two scales on seeking support, presented the most meaningful factor content and proved in best accord with the dimensions in the originally selected subscales on coping styles (see Table I). Note that only factor loadings above 0.40 are given. The five factor solution accounted for 45.3% of the total variance in items assessing coping styles.

The first factor, 'seeking social support', was constructed from items from two

subscales from the COPE scale, 'seeking social support for instrumental reasons' and 'seeking social support for emotional reasons'. The second factor contained the items from the subscale 'behavioural disengagement' in the COPE scale. In the third factor four items from the subscale 'planning' and two from the subscale 'active coping' in the COPE scale had factor loadings above 0.40. This factor was labelled 'planning'. The fourth factor, 'self-blame', contained the items taken from the self-blame subscale in the coping scale of Vitaliano *et al.* (1985). Finally, the fifth factor contained the three items that were included in the subscale 'aggressive coping' in the 'Life Events and Coping Inventory' (Dise-Lewis, 1988), and was named correspondingly. This factor structure was tested by confirmatory factor analysis implementing maximum likelihood estimation and with factor loadings fixed to loadings from the exploratory factor analysis. The analysis indicated a close fit for the five factor solution (RMSEA = 0.048, 90% CI = 0.045 − 0.051; GFI = 0.95; CFI = 0.94).

Items implemented to assess emotional and behavioural problems were taken from three scales assessing externalizing problems, off-task orientation and emotional problems. A factor analysis allowing for three factors was therefore implemented (see Table II). This factor analysis yielded a factor structure in accordance with the original subscales. The three factors accounted for 45.4% of the total variance in items related to emotional and behavioural problems. The factors were termed 'externalizing problems', 'emotional problems' and 'off-task orientation'. A confirmatory factor analysis equivalent to that used for the measurement model for the assessment of coping styles indicated a close fit for the measurement model for emotional and behavioural problems (RMSEA = 0.048, 90% CI = 0.045–0.052; GFI = 0.96; CFI = 0.96). Cronbach's α for factor-based scales were: externalizing problems = 0.80 (5 items), emotional problems = 0.83 (7 items) and off-task orientation = 0.75 (4 items).

Item content of items in instruments assessing self-blame and aggressive coping may overlap with item content in scales assessing emotional problems and externalizing problems, respectively. To test the dicrimant validity of these variables two alternative confirmatory factor analyses including all indicators for coping styles and emotional and behavioural problems were conducted. The first were specified according to the factor structures presented in Tables I and II. In the second analysis, items for self-blame and emotional problems were set to load on one latent variable and items for aggressive coping and externalizing problems were set to load on another single latent variable. The results showed that the first model yielded a significantly better fit than the second factor structure ($\delta\chi^2$ (13) = 1153, $P < 0.001$). The variables assessing self-blame and aggressive coping could therefore be empirically distinguished from the variables assessing emotional problems and externalising problems, respectively.

In order to assess students' use of coping styles, factor-based index scores were computed. These indices included items with factor loadings above 0.40 and items were weighted to correspond with the factor loadings. Scores for indexes ranged from 0 to 3. These indexes had the following Cronbach α values: planning = 0.81 (6 items), seeking social support = 0.87 (7 items), behavioural disengagement = 0.68

TABLE I. Factor loadings, eigenvalues and variance explained for the five factors derived from the factor analyses of items assessing students' coping styles

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Seeking social support					
I talk to someone about how I feel	0.85				
I discuss my feelings with someone	0.78				
I try to get emotional support from friends or relatives	0.72				
I talk to someone to find out more about the situation	0.69				
I talk to someone who could do something concrete about the problem	0.57				
I get sympathy and understanding from someone	0.57				
I ask people who have had similar experiences what they did	0.55				
I try to get advice from someone about what to do	–				
Behavioural disengagement					
I give up trying to reach my goal		0.71			
I give up the attempt to get what I want		0.71			
I admit to myself that I can't deal with it, and quit trying		0.45			
I reduce the amount of effort I'm putting into solving the problem		–			
Planning					
I try to come up with a strategy about what to do			0.75		
I make a plan of action			0.74		
I think hard about what steps to take			0.65		
I do what has to be done, one step at a time			0.55		
I think about how I might best handle the problem			0.53		
I concentrate my efforts on doing something about it			0.45		
I take additional action to try to get rid of the problem			–		
I take direct action to get around the problem			–		
Self-blame					
I think it is my fault				0.81	
I blame myself				0.73	
I criticize myself				0.51	
I realized I brought the problem on myself				0.49	
Aggressive coping					
I take it out on someone else					0.64
I throw things or break things					0.57
I get irritated					0.54
Eigenvalues	5.2	2.4	1.4	0.8	0.6
Variance explained (total 45.3%)	22.6%	10.2%	6.2%	3.5%	2.8%

The factor analysis implemented principal axis factoring extraction and oblique rotation. Note that only factor loadings above 0.40 are given.

TABLE II. Factor loadings, eigenvalues and variance explained for the three factors derived from factor analyses of items assessing student behaviour

	Factor 1	Factor2	Factor 3
Externalizing problems			
Serious quarrelling with teachers	0.73		
Serious fights with other students	0.69		
Sent out of class due to disruptive behaviour	0.68		
Serious quarrelling with other students	0.63		
Swearing at teachers	0.63		
Emotional problems			
Feeling blue		0.78	
Worrying or stewing about things		0.71	
Nervousness or shakiness inside		0.70	
Feeling fearful		0.65	
Feeling hopeless about the future		0.64	
Feeling no interest in things		0.58	
Suddenly scared for no reason		0.55	
Off-task orientation			
When we do group-work, I concentrate on the task			0.76
When we do projects, I concentrate on the task			0.69
When teachers instruct the whole class I pay attention			0.58
When we work individually, I concentrate on the task			0.54
Eigenvalues	3.9	2.3	1.0
Variance explained (total 45.4%)	24.5%	14.5%	6.5%

The factor analysis implemented principal axis factoring extraction and oblique rotation. Note that items concerning off-task orientation were reversed before entering the factor analysis.

TABLE III. Percentage of responses within sections of scoring intervals, mean scores and standard deviation for scales assessing coping styles for the whole sample of students

	Very infrequent use (%)	Infrequent use (%)	Some use (%)	Frequent use (%)	Mean	SD	Cronbach's α
Planning	16.6	40.8	32.5	10.2	1.39	0.65	0.81
Seeking social support	32.4	34.5	22.8	10.3	1.17	0.76	0.87
Behavioural disengagement	53.4	30.8	12.5	3.3	0.75	0.71	0.68
Self-blame	25.8	36.1	26.1	11.9	1.28	0.77	0.76
Aggressive coping	51.2	29.5	12.9	6.4	0.91	0.70	0.64

Very infrequent use, low $\frac{1}{4}$ of scoring range; Infrequent use, low medium $\frac{1}{4}$ of scoring range; Some use, high medium $\frac{1}{4}$ of scoring range; Frequent use, high $\frac{1}{4}$ of scoring range. Scorings range 0–3.

TABLE IV. Pearson product moment coefficients for correlations of scores for independent variables and control variables with factor scores on emotional and beahvioural problems

	Academic stress	Social stress students	Social stress teachers	Seeking social support	Behavioural disengagement	Planning	Self-blame	Aggressive coping	Externalizing problems	Emotional problems	Off-task orientation
Gender	0.04	0.02	0.06[a]	0.40[a]	0.07[a]	0.17[a]	0.24[a]	0.10[a]	− 0.20[a]	0.18[a]	− 0.10[a]
Academic stress		0.23[a]	0.33[a]	0.05[b]	0.15[a]	0.07[a]	0.17[a]	0.19[a]	0.11[a]	0.24[a]	0.09[a]
Social stress students			0.26[a]	0.04[b]	0.19[a]	0.07[a]	0.14[a]	0.23[a]	0.17[a]	0.29[a]	0.07[a]
Social stress teachers				0.06[a]	0.22[a]	− 0.01	0.14[a]	0.26[a]	0.30[a]	0.26[a]	0.26[a]
Seeking social support					0.08[a]	0.55[a]	0.33[a]	0.19[a]	− 0.02	0.15[a]	− 0.10[a]
Behavioural disengagement						− 0.02	0.43[a]	0.56[a]	0.23[a]	0.32[a]	0.23[a]
Planning							0.38[a]	0.06[a]	− 0.11[a]	0.12[a]	− 0.25[a]
Self-blame								0.43[a]	0.04	0.39[a]	0.02
Aggressive coping									0.35[a]	0.43[a]	0.27[a]
Externalizing problems										0.31[a]	0.53[a]
Emotional problems											0.16[a]

[a] $P < 0.01$.
[b] $P < 0.05$.

TABLE V. Standardized effects of associations between coping styles and emotional and behavioural problems

	Emotional problems	Off-task orientation	Externalizing problems
Control variables			
Gender	0.10[a]	− 0.09[a]	− 0.25[a]
Academic stress	0.09[a]	0.01	− 0.01
Social stress students	0.16[a]	− 0.02	0.06[a]
Social stress teachers	0.09[a]	0.20[a]	0.22[a]
Independent variables			
Seeking social support	− 0.03	0.02	0.08[a]
Behavioural disengagement	0.03	0.08[a]	0.05
Planning	0.01	− 0.25[a]	− 0.11[a]
Self-blame	0.19[a]	− 0.02	− 0.08[a]
Aggressive coping	0.23[a]	0.20[a]	0.31[a]
Multiple R	0.55	0.44	0.50

[a]$P < 0.01$.

(3 items), self-blame = 0.76 (4 items) and aggressive coping = 0.64 (3 items). Moreover, index scores were categorized into four categories to correspond with the scoring format for single items in the subscales. The first category covered index scores from 0 to 0.75 and was labelled 'very infrequent use'; the second covered scores from 0.75 to 1.5 and was labelled 'infrequent use'; the third covered scores from 1.5 to 2.25 and was labelled 'some use'; finally, the fourth category covered scores from 2.25 to 3.00 and was labelled 'frequent use'. The percentages of the index scores within each category are presented in Table III.

As shown in Table III, the highest percentages of responses in the high half of the scoring range were computed for the problem-focused coping style 'planning'. Forty-three per cent of the students had scores within the high or medium high quarter of the scoring range, indicating some or frequent use of this coping style. However, it should be noted that a majority of students reported scores that indicated very infrequent or infrequent use of 'planning'. This should also be seen in the light of the roughly two-thirds of the present sample who reported little use of seeking social support. 'Self-blame' was the second most reported coping style; nearly 40% of the students reported having blamed themselves frequently or somewhat frequently. Finally, responses to items on coping indicated that a substantial minority used the dysfunctional coping styles of aggressive coping and behavioural disengagement.

Multiple multivariate regression analysis was estimated using AMOS (Arbuckle & Wothke, 1999). Factor scores were implemented as measures for coping styles as well as emotional and behavioural problems, and the results are given in Table V. The regression coefficients indicate how much each independent variable contributed to the variance explained in the dependent variables. Results from this analysis showed that all variables assessing coping styles accounted for a unique and

TABLE VI. Results of logistic regressions with dichotomous scores identifying the tenth of students with highest factor scores for emotional and behavioural problems as dependent variables and index scores for coping styles as independent variables

	Emotional problem group	Off-task group	Externalizing problem group
Control variables			
Gender	1.60[a]	0.63[b]	0.20[b]
Academic stress	1.14[a]	0.91	0.90
Social stress students	1.29[b]	1.05	1.02
Social stress teachers	1.12[a]	1.29[b]	1.34[b]
Independent variables			
Seeking social support	0.97	1.00	1.30
Behavioural disengagement	1.33[a]	1.31[a]	1.64[b]
Planning	1.25	0.36[b]	0.68[a]
Self-blame	2.03[b]	1.07	0.83
Aggressive coping	1.96[b]	1.86[b]	2.44[b]

[a] $P < 0.05$.
[b] $P < 0.01$.

significant variance in 'externalizing problems', beyond the effects of gender and school-related stress. The strongest association was computed for 'aggressive coping'. In addition, externalizing problems was moderately associated with less planning and self-blame and, on the other hand, with more behavioural disengagement and seeking of social support. The corresponding analysis incorporating scores for 'emotional problems' as a dependent variable indicated that such problems were associated with more self-blame and aggressive coping. Finally, regression analysis showed that off-task orientation was associated with less planning, more aggressive coping and more behavioural disengagement.

To better illustrate the strength of associations between coping styles and emotional and behavioural problems logistic regressions were conducted. A comparison of the results from the multiple multivariate regression and the logistic regression would also make it possible to inspect whether associations with coping styles differ for the more challenging emotional and behavioural problems and the the moderate ones. Here dichotomous variables based on factor scores for emotional and behavioural problems were implemented. These variables identify the tenth of the sample with the highest scores for each of the three factors on emotional and behavioural problems. The resultant three subsamples were labelled 'the emotional problem group', 'the off-task group' and 'the externaliszing problem group'. Moreover, to allow for a more direct correspondence between coefficients computed by multiple regression and the scoring format of items for coping styles, index scores instead of factor scores for such styles were implemented as independent variables.

For emotional problems logistic regression (Table VI) revealed a pattern of results similar to that computed by linear regression. For this dependent variable the main predictors were 'self-blame' and 'aggressive coping'. The exponential B

indicates that students reporting frequent use of self-blame or aggressive coping were three times as likely to be identified in the emotional problems group as students reporting very infrequent use of self-blame or aggressive coping. Accordingly, students reporting the combination of frequent use of self-blame and aggressive coping would be six times more likely to be identified in the emotional problems group, compared with those reporting the combination of very infrequent use of self-blame and aggressive coping. As regards off-task orientation, 'planning' and 'aggressive coping' emerged as the main predictors. The results indicate that students reporting very infrequent use of planning were nearly five times more likely to be included in the off-task group as students reporting frequent use of planning. Moreover, the results suggest that students reporting a combination of very infrequent use of planning and frequent use of aggressive coping would be seven times as likely to be identified in the off-task group as those exhibiting a combination of frequent use of planning and very infrequent use of aggressive coping. Finally, externalizing problems were mainly predicted by 'aggressive coping'. Students reporting frequent use of aggressive coping were nearly five times as likely to be identified in the externalizing group as students indicating very infrequent use of this coping strategy. Moreover, the results suggest that the combination of frequent use of aggressive coping, frequent behavioural disengagement and very infrequent use of planning raises the risk of being identified in the externalizing problem group by nearly nine times, compared with students reporting very infrequent use of aggressive coping and behavioural disengagement and frequent use of planning.

DISCUSSION

Adolescent coping styles

One purpose of this study was to assess school-related coping styles among adolescent students in general in order to learn more about how adolescents seem to cope with academic and social stress in school. Of the coping styles assessed in the present study, planning was the most frequently reported coping style. Results may, however, indicate that a relatively large percentage of students employ rather passive coping styles when facing academic or interpersonal problems at school. These results may indicate room for improvement regarding students' use of active or problem-focused coping. That nearly 40% of the students reported blaming themselves for problems at school may give rise to concern. The results also showed a tendency for students to employ dysfunctional coping styles, such as aggressive coping and behavioural disengagement (giving in) in order to solve school-related problems.

The main purpose of this study was, however, to explore associations between coping styles and emotional and behavioural problems among adolescent students.

Coping and emotional problems

Self-blame and aggressive coping emerged as the main predictors of emotional

problems. The risk of belonging to the 10% group of students with the most serious emotional problems was about six times higher among students reporting the combination of frequent use of aggressive coping and self-blame compared with those reporting the combination of very infrequent use of aggressive coping and self-blame. Self-blame has been found to be a strong predictor of emotional problems, especially depression (Compas *et al.*, 1988; Endler & Parker, 1994; Sandler *et al.*, 1994). The results of the present study are in accordance with these findings. The conclusion seems to be that, although self-blame may stimulate taking responsibility and active ways of coping, too much self-blame is linked to internalizing emotional problems.

On the other hand, the significant association found between aggressive coping and emotional problems could be viewed as somewhat unexpected. However, there is some previous evidence of associations between aggressive coping and depressive and anxiety-related symptoms (Kurdek, 1987; Leong *et al.*, 1997). The tendency to react with aggressive responses could be a reflection of poor outcome expectancies (McCrae, 1982, 1984; Carver *et al.*, 1989), which in turn are related to emotional problems. Aggressive coping could also be seen as a sign of emotional instability. According to Eysenck's (1982) theory of personality, emotional instability could manifest itself both as acting out behavioural problems and internalizing emotional problems. However, among the students reporting emotional problems, the tendency to self-blame is likely to restrain externalizing problem behaviour.

Coping and off-task orientation

Research into children and adolescents with behavioural problems indicates that such problems could be related to poor social competence and problem-solving skills (Fischler & Kenndall, 1988; Ogden, 1995; Sørlie, 1998). It is therefore interesting to note the negative association between planning and off-task orientation. In logistic regression 'planning' stood out as an important predictor of off-task orientation. The risk of belonging to the tenth of students that reported most serious concentration problems was five times higher for individuals indicating very infrequent use of planning, compared with students reporting frequent use of this coping style. This finding supports the notion that poor problem-solving skills could underlie concentration problems and is in accordance with the theory of self-regulated learning which claims that students are more likely to be motivated to learn when they are capable of planning and accomplishing tasks in an independent/ self-reliant way (Corno & Mandinach, 1983). Moreover, the relationship between infrequent use of planning as a coping style and off-task orientation could also indicate that feeble concentration on schoolwork is due to a poor ability or reluctance to see the future consequences of low effort concerning schoolwork.

The results of the regression analysis also indicate that students with an off-task orientation have a tendency to use aggressive coping in order to solve problems at school. Moreover, the results of the logistic regression showed that individuals with scores indicating frequent use of aggressive coping were nearly three times more likely to be among the tenth of students reporting the most off-task orientation

compared with individuals reporting very infrequent use of this coping style. In line with our assumption, the link between aggressive coping and off-task orientation could indicate that aggressive coping reduces the amount of academic support students receive. Poor support could in turn lead to difficulties in concentration on schoolwork. Moreover, poor support from teachers could negatively affect the teacher–student relationship. The link between aggressive coping and off-task orientation could therefore also indicate that the latter to some degree may be a way to signal discontent with teachers. On the other hand, aggressive coping, as measured in the present study, may also reflect emotional instability. This is believed to be related to restlessness (see, for example, Eysenck, 1982) and restlessness could very well show up as concentration problems at school.

Coping and externalizing problems

Aggressive coping was the main predictor of externalizing behaviour. Students reporting frequent use of aggressive coping were nearly five times as likely to be identified in the externalizing problem group as those demonstrating very low use of this coping style. This tendency for students with externalizing problems to use aggressive coping in order to solve problems is in line with previous research showing associations between aggressive coping styles and externalizing behavioural problems (Loeber & Stouthamer-Loeber, 1986; Recklitis & Noam, 1999). Aggressive coping among students with externalizing problems could be considered a result of emotional instability, poor impulse control and temperamental difficulties (Eysenck, 1982; Loeber, 1990; Kazdin, 1995; Rutter *et al.*, 1998).

Moreover, results suggest that the combination of frequent use of aggressive coping, frequent behavioural disengagement and very infrequent use of planning raised the risk of being placed in the externalizing problem group by nearly nine times, compared with students reporting very infrequent use of aggressive coping and behavioural disengagement and frequent use of planning. The link with behavioural disengagement could indicate poor staying power among students with externalizing problems. Findings lend support to the assumption that much use of behavioural disengagement as a way of dealing with academic problems may lead to a vicious circle of negative expectations, lowered effort and the experience of failure. Failure may lead to frustrations that are expressed as hostile acts towards teachers or fellow students. Moreover, results could reflect the fact that behaviour disengagement signals a devaluation of schoolwork and that devaluation of schoolwork is linked with a lower threshold for displaying behaviour in conflict with school norms.

Moreover, previous research has suggested that externalizing problems could be related to a lack of problem-solving skills (Fischler & Kenndall, 1988; Ogden, 1995; Sørlie, 1998). The moderate, negative association between planning and externalizing problems provides some support for this assumption. The relationship between planning and behaviour was, however, stronger for the off-task group than for the externalizing problem group, indicating that the lack of problem-solving skills is less predominant among students with externalizing problems. Finally, the negative, but weak, association between self-blame and externalizing problems gives some support

to the assumption that too little self-blame could be negative and to previous research indicating that individuals with externalizing problems have an increased tendency to attribute hostile intentions to others and, therefore, to blame others instead of themselves (Graham, 1988; Dogde *et al.*, 1990; Rutter *et al.*, 1998).

Only weak or non-significant associations were found between the seeking of social support and emotional and behavioural problems. These results stand in some contrast to previous research (see, for example, Ryan, 1989). The results concerning social support seeking could be due to the cross-sectional nature of this study. An increment in social support seeking is likely to be a response to stress, and before the assumed beneficial effect of social support has been achieved, the associations between social support seeking and emotional and behavioural problems would be negative. With time, if the support is helpful, the result is a reduction in problems and the correlation between support and problems would become positive. These two aspects of the coping process may counteract to produce no effect for social support on emotional and behavioural problems. Further research is needed to investigate the relationships between seeking social support and emotional and behavioural problems.

Practical implications

The results with regard to adolescents' coping in general may suggest that there is room for improvement in students' coping skills and that schools should increase their efforts to teach students effective coping styles for dealing with school-related stress. The results of previous studies indicate that students can be taught more effective coping skills and that such training has positive effects on adjustment (Humphrey, 1988; Elias, 1989; Caplan *et al.*, 1992; Durlak, 1995). The results of the present study suggest that the stimulation of planning as a coping style could be helpful, especially in order to reduce an off-task orientation. So far as emotional problems are concerned, measures that reduce self-blame and instead enhance more optimistic perceptions of their own resources and thinking patterns may prove beneficial. Moreover, results suggest that measures that improve students' ability to regulate negative emotional activation may reduce emotional problems, an off-task orientation and, perhaps particularly, externalizing problems. Finally, regarding the externalizing group, especially the tenth with the most serious problems, measures that could counteract the process of resignation could be important. However, further research is needed on how measures to improve students' coping skills could be applied to school settings.

Methodological limitations

Some methodological limitations on this research must be owned up to. The data are based on self-reports that may have been subject to a reporting bias. Moreover, the instruments implemented for assessing coping primarily assess the frequency of coping efforts. It is possible that differences in the coping styles observed between the subsamples would have been different if better measurements of the quality of

coping had been included. Moreover, instruments assessing behavioural and emotional problems use different response alternatives. This may have affected the amount of variance accounted for by independent variables. Furthermore, in the present study different dimensions of stress are measured by single items. It is possible that this may have led to an underestimation of the effects of stress and to an overestimation of variance in dependent variables accounted for by variables assessing coping styles. Finally, the present study is a survey design and caution must therefore be exercised in making causal statements between the use of coping styles and problem behaviour.

NOTE

[1]   The present study has a cross-sectional design and does not allow conclusions about effects or causality. The term 'predictor' should only be understood as representing relationships as defined by regression models.

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