Abstract

This longitudinal study investigated whether depression among early adolescents (aged 12–14 years, $N = 116$, 65 girls) can be predicted by interactions between social goal orientations and interpersonal stress. Based on Y. Kuroda and S. Sakurai (2001), this study applied A. J. Elliot and J. M. Harackiewicz's (1996) trichotomous framework of achievement goals to C. S. Dweck and E. L. Leggett's (1988) model of social goals and investigated three types of social goals: social learning goals (to grow through interpersonal experiences), social performance-approach goals (to obtain positive evaluations), and social performance-avoidance goals (to avoid negative evaluations). The results indicated that social learning goals reduced the effects of interpersonal stress, thus protecting against depression, whereas social performance-avoidance goals exacerbated the effects of interpersonal stress, thereby developing depression. Social performance-approach goals neither reduced nor exacerbated the effects of interpersonal stress. The nature and functioning of these goals were discussed.

Keywords: goals; stress; depression; peer relationships

Social Goal Orientations, Interpersonal Stress, and Depressive Symptoms

Among Early Adolescents in Japan: A Test of the Diathesis-Stress Model Using

the Trichotomous Framework of Social Goal Orientations

Adolescence is a crucial developmental period for understanding the onset of depression.

Twenty–forty percent of adolescents have reported to have experienced depressed mood (see

Petersen et al., 1993, for a review), with clinical depression dramatically increasing during

adolescence (e.g., Hankin et al., 1998). Moreover, depressive symptoms during adolescence can

be predictors of depressive disorders and various other indices of maladjustment in later life (e.g.,

Aalto-Setälä, Marttunen, Tuulio-Henriksson, Poikolainen, & Lönnqvist, 2002). Consequently,

there is need for research that elucidates the etiology of depression during adolescence.

Although previous research focused mainly on cognitive and behavioral factors to

explain the etiology of depression, Dykman (1998) has argued that these factors cannot

sufficiently predict depression. Recent studies demonstrate that motivational factors, namely,

goal orientations, can integrate cognitive and behavioral factors and thus enhance the predictive

power of depressive symptoms (Dykman, 1998; Sideridis, 2005; see also Dweck & Leggett,

1988; Lindsay & Scott, 2005). Dweck (1996) defines a goal as the underlying purpose of an

action. From a goal perspective, individuals are viewed not as *passive respondents* who simply

react to their environment but as *active agents* who interact with their environment to attain their

goals (e.g., Dykman, 1998). Further, from this perspective, it can be considered that the

cognition and behavior of individuals are organized around the goals they pursue (e.g., Dweck,

1996; Dweck & Leggett, 1988; Dykman, 1998). Studies linking goals with depressive symptoms have demonstrated that goals drive and direct maladaptive (adaptive) cognitive and behavioral patterns in ways that promote (protect against) depressive symptoms (Dykman, 1998; Elliot & Dweck, 1988; Erdley, Cain, Loomis, Dumas-Hines, & Dweck, 1997; Kuroda & Sakurai, 2003; Lindsay & Scott, 2005; Sideridis, 2005). In light of these findings, the present study examined the onset of depressive symptoms during early adolescence by using a goal orientation approach.

What kinds of goals are associated with depressive reactions during adolescence? On the basis of research concerning children's helplessness, Dweck and her colleagues (Dweck, 1986; Elliott & Dweck, 1988) suggested two types of goal orientations within the academic achievement domain. The first type of goal orientation involves *learning goals*, which are defined as goals of developing academic ability and mastering academic tasks. An individual who pursues learning goals focuses on acquiring new skills and knowledge and is thus less likely to give helpless responses, even when faced with academic failure. The second type of goal orientation involves *performance goals*, which are defined as goals of obtaining positive evaluations and avoiding negative evaluations with regard to academic ability. An individual who pursues performance goals focuses on measuring his or her ability and is thus more likely to give helpless responses when faced with academic failure.

Although there is a growing body of evidence establishing the effects of goals on depressive symptoms within the academic achievement domain (e.g., Boggiano, 1998; Dykman, 1998; Elliott & Dweck, 1988; Lindsay & Scott, 2005; Sideridis, 2005), little attention has been

paid to the same within the social interaction domain. Yet, when examining adolescent

depression, it is particularly important to focus on interpersonal relationships for the following

reasons. Recent studies have demonstrated that problems in interpersonal relationships generally

have a large effect on the onset, maintenance, and exacerbation of depression (see Joiner &

Coyne, 1999, for a review). During adolescence, in particular, interpersonal interactions are

considered to be deeply involved in the onset of depression. For example, because adolescents

show strong concern over evaluations by other people (Westenburg, Drews, Goedhart, Siebelink,

& Treffers, 2004), they are susceptible to negative evaluations. In fact, recent studies have found

that rejection by others is a strong predictor of depressive symptoms among adolescents

(Buhrmester, 1990; Burwell & Shirk, 2006; Hirsch & DuBois, 1992; Nolan, Flynn, & Garber,

2003). Hence, given the important role of goal orientations in the etiology of depression, it is

important to investigate whether goals in the context of interpersonal relationships, namely,

social goals, serve as risk or protective factors for depressive symptoms among adolescents.

Dweck and her colleagues (Dweck & Leggett, 1988; Erdley et al., 1997) have expanded

their original goal theory—which was applicable to the academic achievement domain—to the

social interaction domain. In the expanded model, the learning–performance distinction between

achievement goals is applied to social goals. Learning goals in the social interaction domain

(which can be expressed as *social learning goals*) are defined as goals of developing social

attributes and acquiring social experience, which are likely to create resistance to helpless

responses. Performance goals in the social interaction domain (which can be expressed as *social*

performance goals) are defined as goals of obtaining positive evaluations and avoiding negative

ones with regard to social attributes, which are likely to induce vulnerability to helpless reactions.

More recently, Kuroda and Sakurai (2001, 2003) have extended Dweck and colleagues' social

goals model by incorporating Elliot and Harackiewicz's (1996) trichotomous achievement goal

framework into the model (see also Ryan & Shim, 2006, for a similar discussion). Elliot and

Harackiewicz's (1996) trichotomous achievement goal framework posits that performance goals

within the academic achievement domain can be divided into two components: approach and

avoidance. Performance-approach goals are defined as goals of obtaining favorable judgments on

competence and attaining normative competence, whereas performance-avoidance goals are

defined as goals of avoiding unfavorable judgments on competence and normative incompetence

(Elliot & Harackiewicz, 1996).

Drawing on the basic propositions of Dweck and colleagues' model and Elliot and

Harackiewicz's (1996) trichotomous framework, Kuroda and Sakurai (2001, 2003) have

proposed three types of social goal orientations: social learning goals (to grow through

interpersonal experiences), social performance-approach goals (to obtain positive evaluations of

one's social attributes), and social performance-avoidance goals (to avoid negative evaluations of

one's social attributes). Consistent with Dweck and colleagues' model, Kuroda and Sakurai

(2001, 2003) found that social learning goals were negatively related to depressive symptoms,

and social performance-avoidance goals were positively related to depressive symptoms.

However, in contrast to Dweck and colleagues' model and in support of the utility of applying

Elliot and Harackiewicz's (1996) trichotomous framework of achievement goals to Dweck and

colleagues' model of social goals, Kuroda and Sakurai (2001, 2003) found that social

performance-approach goals were negatively related to depressive symptoms.

Although Kuroda and Sakurai (2001, 2003) investigated the relationships between the

three social goals and depressive symptoms, two important issues remain unresolved. First,

because Kuroda and Sakurai (2001, 2003) employed a cross-sectional design, it is not possible,

so far, to draw conclusions regarding the causal links between the three social goals and

depressive symptoms. Therefore, studies using a longitudinal design are necessary to adequately

examine the causal relations. Second, it is not clear how the three social goals lead to or protect

against the onset of depressive symptoms. To explain how psychological factors lead to the onset

of depression, theories concerning depression (e.g., Alloy, Abramson, Metalsky, & Hartlage,

1988; Beck, 1983) have adopted the diathesis-stress model. According to this model, individuals

with a risk factor develop depression after the occurrence of negative events but not in the

absence of such events. Recent studies have tested the diathesis-stress model of depressive

symptoms in adolescents by focusing mainly on cognitive factors as the diatheses, such as

depressogenic attributional styles and dysfunctional attitudes (e.g., Abela, 2001; Abela &

Sullivan, 2003; Hankin, Abramson, & Siler, 2001; Prinstein & Aikins, 2004; Turner & Cole,

1994). To examine the diathesis-stress model of adolescent depression from a perspective other

than a cognitive one, it is important to investigate whether social goals can interact with negative

interpersonal events to predict the onset of depressive symptoms. Greater insight into the effects

of interactions between social goals and interpersonal stress on depressive symptoms will also

improve our ability to identify individuals who are vulnerable or resistant to interpersonal stress,

which has been found to have a large effect on depressive symptoms among adolescents (e.g.,

Buhrmester, 1990; Hirsch & DuBois, 1992; Nolan et al., 2003).

This study used a longitudinal design to examine whether depressive symptoms among

early adolescents could be predicted on the basis of interactions between each of the three social

goal orientations (i.e., social learning, social performance-approach, and social performance-

avoidance) and interpersonal stress. Given the basic definition of a goal (e.g., Dweck, 1996;

Dweck & Leggett, 1988), it follows that the three social goals could direct cognitive, affective,

and behavioral patterns in the face of negative interpersonal events, which, in turn, could

influence depressive symptoms. We hypothesized two different mechanisms with regard to the

manner in which the three social goals could be predictors of depressive symptoms in the face of

interpersonal stress. The first mechanism is explained in terms of the *standard* by which the

attainment of social goals is judged (see also Elliot, 2005, for a discussion on achievement goals).

Specifically, if the attainment of a social goal is determined by how *others* evaluate the

individual, maladaptive cognition, affect, and behavior could be evoked in the face of

interpersonal stress such as rejection by others (e.g., Erdley et al., 1997); this could promote

depressive symptoms in the individual. In contrast, if the attainment of a social goal is

determined by how *the individual* grows within interpersonal relationships, then adaptive

cognition, affect, and behavior could be induced in the face of interpersonal stress (e.g., Erdley et

al., 1997); this could protect the individual against depressive symptoms. (We treat this

mechanism as the *standard hypothesis* in this article.) The second mechanism is described in

terms of the *valence* or *direction* of focus of an individual's social goals (see also Elliot, 2005).

Specifically, if an individual focuses on avoiding the *negative* possibilities of interpersonal

outcomes, then the cognitive, affective, and behavioral patterns that sensitize the individual to

negative interpersonal events could become dominant (Gable, 2006; Rudolph, Caldwell, &

Conley, 2005; Strachman & Gable, 2006); this could promote depressive symptoms in the

individual. In contrast, if an individual focuses on the *positive* possibilities of interpersonal

outcomes, then the cognitive, affective, and behavioral patterns that desensitize the individual to

negative interpersonal events could be evoked (Gable, 2006; Rudolph et al., 2005; Strachman &

Gable, 2006); this could protect the individual against depressive symptoms. (We call this

mechanism the *valence hypothesis*.). In line with the standard and valence hypotheses, we

formulated the following specific predictions with respect to each of the three social goals.

With regard to social learning goals, because the attainment of these goals is determined

by how the individual grows through interpersonal experiences, adaptive cognition, affect, and

behavior could be induced in the face of negative interpersonal events (e.g., positive

interpretation of the events, retaining positive affect, and active behavior for repairing

interpersonal relationships); this could protect the individual against depressive symptoms (the

standard hypothesis). Further, because an individual who pursues social learning goals focuses

on the *positive* possibilities of interpersonal outcomes (i.e., acquiring interpersonal experiences

and growing), then the cognitive, affective, and behavioral patterns that desensitize the individual

to negative interpersonal events could be evoked; this could protect the individual against

depressive symptoms (the valence hypothesis). In sum, when faced with negative interpersonal

events, adolescents who pursue social learning goals could be less prone to depressive symptoms

than those who do not pursue social learning goals.

With regard to social performance-avoidance goals, because the attainment of these goals

is determined by how *others* evaluate the individual, maladaptive cognition, affect, and behavior

(e.g., negative self-evaluation, sadness, and disappointment) could be evoked in the face of

interpersonal stress such as rejection by others; this could promote depressive symptoms in the

individual (the standard hypothesis). Further, because an individual who pursues these goals

focuses on the *negative* possibilities of interpersonal outcomes (i.e., negative evaluative

responses from others), the cognitive, affective, and behavioral patterns that sensitize the

individual to negative interpersonal events could become dominant; this could promote

depressive symptoms in the individual (the valence hypothesis). In sum, when faced with

negative interpersonal events, adolescents who pursue social performance-avoidance goals could

be prone to depressive symptoms than those who do not pursue social performance-avoidance

goals.

Social performance-approach goals could take a more complex form in the face of

interpersonal stress than predicted by Dweck and colleagues' model, in which social performance

goals—regardless of approach or avoidance orientations—were posited to render individuals

vulnerable to negative events. Because the attainment of these goals is determined by how *others* evaluate the individual, maladaptive cognition, affect, and behavior could be evoked in the face of interpersonal stress (the standard hypothesis). However, because an individual who pursues social performance-approach goals focuses on the *positive* possibilities of interpersonal outcomes (i.e., potential positive evaluations from others), then the cognitive, affective, and behavioral patterns that desensitize the individual to negative interpersonal events could be evoked. When taken together, social performance-approach goals could elicit both negative and positive psychological functioning in the face of negative interpersonal events, and thus, could neither exacerbate nor reduce the effects of these events, thereby producing a null effect on depressive symptoms.

The present study focused on peer relationships when assessing social goal orientations and negative interpersonal events, because previous studies have found that peer perceptions assume increasing importance during adolescence, and thus, stressful relationships with peers have a great impact on depressive symptoms at this stage (e.g., Buhrmester, 1990; Vernberg, 1990).

<div align="center">Method</div>

Participants

Participants for this study were recruited from a public middle school in a midsized city in Japan. All the participants were Japanese and came from the same cultural background.

We held two sessions 13 months apart (Time 1 and Time 2). Of the 134 seventh grade

students who participated at Time 1, 18 students (7 girls, 11 boys) either provided incomplete

data or were absent from school at Time 2. Therefore, the final sample for this study consisted of

116 students (65 girls, 51 boys). The students were 12–13 years old at Time 1 and 13–14 years

old at Time 2.

Measures

Social goal orientations. The Social Goal Orientations Scale (SGOS; Kuroda & Sakurai,

2001) was used to assess the students' adoption of social learning, social performance-approach,

and social performance-avoidance goals. The social learning goal subscale assessed an

individual's goal of developing himself or herself through interpersonal experiences and

consisted of 10 items (e.g., "I want to develop myself by interacting with my friends," "I want to

get acquainted and speak with other kids who think differently than me," "It is important for me

to interact with other kids with different personalities," and "I am looking forward to growing up

while developing relationships with my friends"). The social performance-approach goal

subscale assessed an individual's goal of obtaining positive evaluations of his or her social

attributes and consisted of 7 items (e.g., "I want my friends to say 'you are a likeable person,'" "I

want to be nicer than other kids," "I want to make a favorable impression on my friends," and "I

want to have a good personality, which will attract friends"). The social performance-avoidance

goal subscale assessed an individual's goal of avoiding negative evaluations of his or her social

attributes and consisted of 8 items (e.g., "I always want to avoid negative evaluations of my

personality," "I just want to avoid making a bad impression on my friends," "I try to hide the

negative aspects of my personality," and "I want to avoid other kids who dislike me in order to

avoid their criticism of my personality"). Participants rated each item on a 4-point Likert scale

(ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]). Kuroda and Sakurai (2001) have

demonstrated that the SGOS has sufficient reliability (internal consistency and test-retest

reliability) and validity (construct validity). In the present study, the Cronbach's alpha

coefficients for internal consistency were .79 for the social learning goal subscale, .85 for the

social performance-approach goal subscale, and .80 for the social performance-avoidance goal

subscale.

  Negative interpersonal events. The Negative Interpersonal Events Scale (Takahira, 1998)

was used to measure the participants' interpersonal stress levels. This scale was developed to

assess the negative events that adolescents experienced in relationships with friends, romantic

partners, and family members. In this study, because our focus was on peer relationships, the

scale was modified to assess the occurrence of negative events within such relationships. The

modified version consisted of 14 items (e.g., "I was ignored by my friend," "I was

misunderstood by my friend," "I was criticized by my friend," and "I hurt my friend"). In order

to both avoid reporting bias and minimize the underreporting of negative interpersonal events,

we asked the participants to rate the frequency with which they had experienced each event not

in the entire interval between Time 1 and Time 2 but rather in the past 3 months. Participants

rated the frequency of each event on a 4-point Likert scale (ranging from 0 [*didn't happen at all*] to 3 [*frequently happened*]).

    Depressive symptoms. Depressive symptoms were measured using the Child Depression Inventory-Japanese Short Version (CDI-JSV; Kuroda & Sakurai, 2001). The original inventory (CDI) developed by Kovacs (1983) is a widely used measure for assessing depressive symptoms in early adolescents and consists of 27 items. The CDI-JSV consisted of 13 items that had the highest item-total correlation (.46–.63) in the full Japanese version of the CDI.[1] Each item contained three statements (e.g., "I am sad once in a while," "I am sad many times," and "I am sad all the time"), and participants were asked to choose the statement that best described their level of depressive symptoms in the past 2 weeks. The score for each item ranged from 1 to 3, with a higher score indicating greater symptom severity. In this study, the Cronbach's alpha coefficient for this scale was .80 at Time 1 and .84 at Time 2, indicating sufficient internal consistency.

Procedure [2]

    While conducting this study, every precaution was taken to ensure that there would be no negative psychological impacts on the participants and that their rights were protected. The authors checked the contents of this study carefully in advance, in cooperation with their peer researchers. They also explained the contents of this study to the participating school's principal and classroom teachers. This process led us to remove the suicidal item on the CDI-JSV because it was deemed to have potential negative psychological impacts on students. Finally, consent to

conduct this study was obtained from the school principal, who made the final decision on

whether the students could participate.

The classroom teachers explained the purpose and outline of the study to their students,

handed each one a package containing all the measures, and directed them on completing the

questionnaires. All the students were assured of confidentiality and anonymity, and each

assented to participating in the study.

Data Collection and Analysis

We assessed the three social goal orientations and baseline depressive symptoms at Time

1 and negative interpersonal events and depressive symptoms at Time 2, 13 months later.

In order to test our hypotheses, we conducted a hierarchical regression analysis (Cohen &

Cohen, 1983) with Time 2 depressive symptoms as the dependent variable, Time 1 depressive

symptoms as the covariate, and Time 1 social goal orientations, Time 2 negative interpersonal

events, and each social goal orientation × negative interpersonal events interaction as the

independent variables. This analysis allowed us to predict the residual change scores for

depressive symptoms from Time 1 to Time 2 by using independent variables.

<div align="center">Results</div>

Means, Standard Deviations, and Intercorrelations of the Measures

The means and standard deviations of all the measures are presented in Table 1. The

results of two-tailed *t*-tests examining gender differences with respect to each measure are also

shown in Table 1. The *t*-tests indicate that the girls had higher levels of interpersonal stress than

the boys, which is consistent with previous findings (e.g., Rudolph & Hammen, 1999). Further,

the girls had a higher tendency to adopt social learning and social performance-approach goals

than the boys, which is congruent with previous studies that found that girls had a higher

tendency to adopt intimacy goals (e.g., Jarvinen & Nicholls, 1996) and a greater concern over

social evaluations (e.g., Rudolph & Conley, 2005) than boys. No significant gender differences

were found for the other variables.

The intercorrelations of all the measures are presented in Table 2. Although the social

learning and social performance-approach goal subscales were not significantly correlated with

Time 2 depressive symptoms, these results could be attributable to the moderate-to-high positive

correlations between these two goals and the social performance-avoidance goal subscale, which

was negatively correlated with Time 2 depressive symptoms. When we computed partial

correlations between each of the three social goals and Time 2 depressive symptoms while

controlling for the remaining two social goals, the subscales for social learning goals and social

performance-avoidance goals were found to have significant partial correlations with Time 2

depressive symptoms (respectively $pr = -.19$, $p < .05$, two-tailed; $pr = .31$, $p < .01$, two-tailed).

The social performance-approach goal subscale did not show a significant partial correlation

with Time 2 depressive symptoms, though the direction of the correlation was negative ($pr = -$

.13, $p = .17$, two-tailed).

Insert Table 1 and Table 2 about here

Analysis of the Diathesis-Stress Model

First, to examine the moderating effect of gender, a hierarchical regression analysis was performed in four steps as follows. In the first step, Time 1 depressive symptoms were entered into the equation as a covariate. The second step involved entering main effect terms (the three social goals, negative interpersonal events, and gender). The third step involved entering two-way interaction terms (each social goal × negative interpersonal events, each social goal × gender, and negative interpersonal events × gender). Finally, three-way interaction terms (i.e., each social goal × negative interpersonal events × gender) were included in the equation. To avoid the problem of multicollinearity, the scores for all the measures included as the independent variables were centered at their means before the analysis was performed (Aiken & West, 1991). The results showed that none of the interaction terms involving gender were significant. Therefore, we removed the main effect and two- and three-way interaction terms involving gender from the above analysis and conducted another hierarchical regression analysis.

The results are shown in Table 3.[3] As can be seen, two main effects at Step 2 were significant. Specifically, social learning goals and negative interpersonal events were significant predictors of change in depressive symptoms from Time 1 to Time 2. Moreover, two interaction terms at Step 3 were significant. Specifically, the interactions of social learning goals × negative interpersonal events and social performance-avoidance goals × negative interpersonal events were significant predictors of change in depressive symptoms.

We examined the form of each interaction according to the procedure recommended by

Cohen and Cohen (1983). When examining the form of the social learning goals $\times$ interpersonal

stress interaction, we calculated the residual change scores for depressive symptoms from Time 1

to Time 2 by inserting specific values (1 SD above and below the mean) for social learning goals

and interpersonal stress scores into the regression equation. Likewise, when examining the form

of the social performance-avoidance goals $\times$ interpersonal stress interaction, we computed the

residual change scores for depressive symptoms by inserting specific values (1 SD above and

below the mean) for social performance-avoidance goals and interpersonal stress scores into the

regression equation. In each analysis, the means were inserted into the regression equation as

values for all the independent variables not involved in the interaction term. The results are

depicted in Figures 1 and 2.

Figure 1 shows that when experiencing a high level of interpersonal stress, students with

a low level of social learning goals exhibited a greater increase in depressive symptoms from

Time 1 to Time 2 than those with a high level of social learning goals. Students who did not

experience a high level of interpersonal stress did not exhibit an increase in depressive symptoms

regardless of their level of social learning goals. Figure 2 shows that when experiencing a high

level of interpersonal stress, students with a high level of social performance-avoidance goals

exhibited a greater increase in depressive symptoms from Time 1 to Time 2 than those with a

low level of social performance-avoidance goals. Students who did not experience a high level of

interpersonal stress did not exhibit an increase in depressive symptoms regardless of their level

of social performance-avoidance goals.

Insert Table 3, Figure 1, and Figure 2 about here

Discussion

The results of the hierarchical regression analysis supported our hypotheses. In brief, in

the presence of interpersonal stress, (1) social learning goals protect against the onset of

depressive symptoms, (2) social performance-avoidance goals promote depressive symptoms,

and (3) social performance-approach goals neither protect against nor promote depressive

symptoms. We now provide a detailed discussion of the results from the perspectives of the

standard and valence hypotheses.

For adolescents pursuing social learning goals, experiencing negative interpersonal

events is consistent with attaining their goals of acquiring social experience and growing through

the process (standard hypothesis). Moreover, adolescents pursuing social learning goals focus on

potential positive social outcomes (i.e., growing through social experience; valence hypothesis).

Therefore, adolescents pursuing these goals are more likely to show adaptive cognitive, affective,

and behavioral patterns in the face of interpersonal stress. For example, they will be motivated to

interpret negative interpersonal events as opportunities for self-growth or repair any troubled

relationships with their peers. Such functioning will buffer against the adverse effects of interpersonal stress and thus protect the adolescents against the onset of depressive symptoms.

The present results suggest that the two types of social performance goals function differently in the presence of negative interpersonal events. For adolescents pursuing social performance-avoidance goals, the occurrence of negative interpersonal events implies that they have failed to attain their goals (standard hypothesis). Moreover, adolescents pursuing social performance-avoidance goals focus on potential negative social outcomes (i.e., negative evaluations by others; valence hypothesis). Therefore, adolescents pursuing these goals are more likely to show maladaptive cognitive, affective, and behavioral patterns after the occurrence of negative interpersonal events. For example, in the face of peer rejection, they will make negatively biased interpretations of the rejection, anticipate further rejection, and withdraw from peer relationships in order to avoid further negative evaluations. These kinds of dysfunctional cognition, affect, and behavior lead them to isolate themselves from their peers (e.g., Asher & Coie, 1990; Erath, Flanagan, & Bierman, 2007), making them more prone to depressive symptoms.

In contrast to social performance-avoidance goals, social performance-approach goals do not exacerbate the effects of interpersonal stress. For adolescents pursuing social performance-approach goals, the occurrence of negative interpersonal events implies that they have failed to attain their goals (standard hypothesis). Therefore, they will be threatened by such events. However, because adolescents pursuing these goals focus on potential positive social outcomes

(i.e., positive evaluations from others; valence hypothesis), they are more likely to show adaptive

cognitive, affective, and behavioral patterns after the occurrence of negative interpersonal events.

For example, they will be motivated not to attend to past negative evaluations but to anticipate

positive evaluations from others. Further, they are more likely to utilize active and relatively

adaptive coping strategies for dealing with negative interpersonal events in order to attain

positive social outcomes in the future. More specifically, when such adolescents have troubled

relationships with their peers, they will either try to regain positive evaluations from the peers or

seek new peers who are likely to give positive evaluations. Overall, social performance-approach

goals play both a negative and positive role in the face of interpersonal stress, which might have

yielded the result that depressive symptoms among adolescents cannot be predicted on the basis

of interactions between social performance-approach goals and interpersonal stress.

The present results did not show any gender differences in the relationships between the

three social goals, interpersonal stress, and depressive symptoms. Although girls had higher

levels of social learning goals, social performance-approach goals, and interpersonal stress than

boys, none of the variables or the interactions between the social goals and interpersonal stress

had differential effects on depressive symptoms according to gender. These results are consistent

with those of previous studies, which also did not find any gender differences in the effects of

cognitive or personality factors on the onset of depressive symptoms in early adolescents (Abela,

Brozina, & Haigh, 2002; Abela, Sakellaropoulo, & Taxel, 2007; Abela & Sullivan, 2003).

The present findings contribute to the existing literature on goal orientations, stress, and depression. First, the current study advances the research on the diathesis-stress model of adolescent depression by examining social goal orientations (namely, social-motivational factors) as diatheses or protective factors for depressive symptoms. Although researches have focused mainly on cognitive factors as the diatheses (e.g., Abela et al., 2002; Abela & Sullivan, 2003; Hankin et al., 2001; Prinstein & Aikins, 2004; Turner & Cole, 1994), this study indicates that when negative events occur, social-motivational factors also serve as risks or protective factors for depressive symptoms. Second, this study contributes to the literature on interpersonal stress by identifying factors that moderate the effects of negative interpersonal events. Although negative interpersonal events have been found to have an important effect on depressive symptoms among adolescents (e.g., Nolan et al., 2003), this study indicates that social-motivational factors can alter such effects. Finally, the present study advances the research on social goal orientations. Differentiating social performance goals into approach and avoidance components, this study demonstrates that social performance-approach goals play a distinctive role in the face of interpersonal stress: these goals play a more adaptive role than social performance-avoidance goals, though not as much as social learning goals. These results differ from the prediction of Dweck and Leggett's (1988) model, which posits both types of social performance goals as harmful. The results also differ from those of Kuroda and Sakurai's (2001, 2003) studies. While Kuroda and Sakurai (2001, 2003) found that social performance-approach goals were negatively correlated with concurrent depressive symptoms, the present study

indicates that although these goals have a negative (albeit weak) correlation with future

depressive symptoms, they do not actively reduce the effects of negative interpersonal events,

which can lead to depressive symptoms. Hence, when negative interpersonal events do not occur,

social performance-approach goals will actively promote adolescents' adjustment.

The present study also has implications for strategies aimed toward preventing depressive

symptoms during early adolescence. Because of the vicious cycle wherein interpersonal stress

has a significant effect on adolescent depression and depression contributes to further

interpersonal stress, which only exacerbates the depression (see Hammen, 2006, for a review),

adolescents should be encouraged to develop resilience in the face of negative interpersonal

events. On the basis of the social-motivational perspective, the present study suggests that

adolescents' level of resistance to interpersonal stress depends on the type of goal they pursue in

the context of interpersonal relationships. In light of the current findings, we can say that

adolescents should avoid setting social performance-avoidance goals (i.e., they should try not to

pay too much attention to negative responses from others) in order to reduce their vulnerability

to negative interpersonal events. Possible preventive strategies may involve promoting social

learning goals, which buffer against the negative effects of interpersonal stress. However,

because adolescents tend to be strongly concerned about how they are perceived by others (e.g.,

Westenburg et al., 2004), it may be difficult for some of them to be unaffected by others'

evaluations. Given that social performance-approach goals induce more adaptive cognitive,

affective, and behavioral patterns than social performance-avoidance goals, an alternative

preventive strategy may involve helping adolescents focus on potential positive responses and

evaluations by others rather than on potential negative ones. Such preventive strategies may be

enhanced through the use of interpersonal therapy for depressed adolescents, which targets the

promotion of social functioning in adolescents and is shown to reduce depression among

adolescents with a high level of social concerns (Horowitz, Garber, Ciesla, Young, & Mufson,

2007).

Finally, the limitations of this study should be noted. First, the sample size in this study

was small. Future studies should examine a larger sample in order to enhance the statistical

power of the results. Second, we relied on self-reported scales to assess interpersonal stress.

Although questionnaires that require participants to indicate the frequency of particular events

are less likely to be influenced by reporting bias than those that ask participants to rate the

subjective impact of each event (Abela & Sullivan, 2003), an alternative method, such as

interviews, may yield a more objective assessment. Third, because the current study used a

community sample of adolescents and did not examine clinically depressed adolescents, we must

be cautious about generalizing the present findings to clinical samples. Fourth, this study did not

directly examine the cognitive, affective, and behavioral processes that are evoked by each of the

three social goals in the face of interpersonal stress. Further research is needed to demonstrate

these processes. Fifth, although this study revealed the unique nature of social performance-

approach goals, future research is necessary to specify in more detail when and why social

performance-approach goals are more likely or less likely to promote adolescent adjustment.

Sixth, because our study was conducted in Japan, we may need to take into account the

possibility of cultural differences in the present results. Future research should be conducted in

other countries to confirm the general applicability of the present results. Finally, future research

should further elaborate on the interpersonal risk and protective factors of depression, including

social goals, during early adolescence. For example, to explain the dynamic nature of

interpersonal factors in depression among early adolescents, future research should examine the

interactions between the three social goals and other important interpersonal factors such as

social support and the extent to which these interactions can predict depression. It is also

necessary to investigate risk and protective factors for depression among early adolescents from

a developmental perspective. Alloy and Abramson (2007) recently studied these factors from a

biocognitive developmental perspective and proposed that owing to normative biological

development during adolescence, cognitive diatheses consolidate and thereby contribute to the

rise of depression during this period. Considering the developmental, biological, and

psychological mechanism during early adolescence may help us elucidate a mechanism by which

goal orientations begin to function as risk and protective factors during this period. Thus, further

studies are needed to resolve the above issues and closely examine the role of the three social

goals in the well-being of individuals during early adolescence.

References

Aalto-Setälä, T., Marttunen, M., Tuulio-Henriksson, A., Poikolainen, K., & Lönnqvist, J. (2002).

Depressive symptoms in adolescence as predictors of early adulthood depressive

disorders and maladjustment. *American Journal of Psychiatry*, *159*, 1235-1237.

Abela, J. R. Z., Brozina, K., & Haigh, E. P. (2002). An examination of the response styles

theory of depression in third- and seventh-grade children: A short-term longitudinal study.

Journal of Abnormal Child Psychology, *29*, 241-254.

Abela, J. R. Z., Sakellaropoulo, M., & Taxel, E. (2007). Integrating two subtypes of depression:

Psychodynamic theory and its relation to hopelessness depression in early adolescents.

Journal of Early Adolescence, *27*, 363-385.

Abela, J. R. Z., & Sullivan, C. (2003). A test of Beck's cognitive diathesis-stress theory of

depression in early adolescents. *Journal of Early Adolescence*, *23*, 384-404.

Aiken, L. S., & West, S. G. (1991) Multiple regression: Testing and interpreting interactions.

London: Sage.

Alloy, L. B., Abramson, L. Y., Metalsky, G. I., & Hartlage, S. (1988). The hopelessness theory

of depression: Attributional aspect. *British Journal of Clinical Psychology*, *27*, 5-21.

Alloy, L. B., & Abramson, L. Y. (2007). The adolescent surge in depression and emergence of

gender differences: A biocognitive vulnerability−stress model in developmental context.

In D. Romer & E. F. Walker (Eds.), *Adolescent Psychopathology and the Developing*

Brain: Integrating brain and prevention science (pp.284-312). Oxford: Oxford

University Press.

Asher, S. R., & Coie, J. D. (1990). *Peer rejection in childhood*. New York: Cambridge

University Press.

Beck, A. T. (1983). Cognitive therapy of depression: New perspective. In P. J. Clayton & J. E.

Barrett (Eds.), *Treatment of depression: Old controversies and new approaches* (pp.265-

290). New York: Raven Press.

Bogiano, A. K. (1998). Maladaptive achievement pattern: A test of a diathesis-stress analysis of

helplessness. *Journal of Personality and Social Psychology*, *74*, 1681-1695.

Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during

preadolescence and adolescence. *Child Development*, *61*, 1101-1111.

Burwell, R. A., & Shirk, S. R. (2006). Self-processes in adolescent depression: The role of self-

worth contingencies. *Journal of Research on Adolescence*, *16*, 479-490.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the

behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*,

1040-1048.

Dweck, C. S. (1996). Capturing the dynamic nature of personality. *Journal of Research in

Personality*, *30*, 348-362.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and

   personality. *Psychological Review*, *95*, 256-273.

Dykman, B. M. (1998). Integrating cognitive and motivational factors in depression. *Journal of*

   Personality and Social Psychology, *74*, 139-158.

Elliot, A. J. (2005) A conceptual history for the achievement goal construct. In A. J. Elliot & C.

   S. Dweck (Eds.), *Handbook of Competence and Motivation* (pp.52-72). New York:

   Guilford Press.

Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and

   intrinsic motivation: A mediational analysis. *Journal of Personality and Social*

   Psychology, *70*, 461-475.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement.

   Journal of Personality and Social Psychology, *54*, 5-12.

Erath, S. A., Flanagan, K. S., & Bierman, K. L. (2007). Social anxiety and peer relations in early

   adolescence: Behavioral and cognitive factors. *Journal of Abnormal Child Psychology*,

   35, 405-416.

Erdley, C. A., Cain, K. M., Loomis, C. C., Dumas-Hines, F., & Dweck, C. S. (1997). Relations

   among children's social goals, implicit personality theories, and responses to social

   failure. *Developmental Psychology*, *33*, 263-272.

Gable, S. L. (2006). Approach and avoidance social motives and goals. *Journal of Personality,*

   74, 175-221.

Hammen, C. (2006). Stress generation in depression: Reflections on origins, research, and future

directions. *Journal of Clinical Psychology*, *62*, 1065-1082.

Hankin, B. L., Abramson, L. Y., Moffitt, T. E., Silva, P. A., McGee, R., & Angell, K. E. (1998).

Development of depression from preadolescence to young adulthood: Emerging gender

differences in a 10-year longitudinal study. *Journal of Abnormal Psychology*, *107*, 128-

140.

Hankin, B. L., Abramson, L. Y., & Siler, M. (2001). A prospective test of the hopelessness

theory of depression in adolescence. *Cognitive Therapy and Research*, *25*, 607-632.

Hirsch, B. J., & DuBois, D. L. (1992). The relation of peer social support and psychological

symptomatology during the transition to junior high school: A two-year longitudinal

analysis. *American Journal of Community Psychology*, *20*, 333-346.

Horowitz, J. L., Garber, J., Ciesla, J. A., Young, J. F., & Mufson, L. (2007). Prevention of

depressive symptoms in adolescents: A randomized trial of cognitive-behavioral and

interpersonal prevention programs. *Journal of Consulting and Clinical Psychology*, *75*,

693-706.

Jarvinen, D. W., & Nicholls, J. G. (1996). Adolescents' social goals, beliefs about the causes of

social success, and satisfaction in peer relations. *Developmental Psychology*, *32*, 435-441.

Joiner, T., & Coyne, J. (1999). *Interactional nature of depression*. Washington, DC: American

Psychological Association.

Kovacs, M. (1983). *The children's depression inventory: A self-rated depression scale for school-aged youngsters*. Unpublished manuscript, University of Pittsburgh.

Kuroda, Y., & Sakurai, S. (2001). Relation between goal orientation in peer relationships and depression among preadolescents. *Japanese Journal of Educational Psychology*, *49*, 129-136.

Kuroda, Y., & Sakurai, S. (2003). Goal orientation in peer relations and depression among preadolescents: "Distress-generation" and "Eustress-Generation" models. *Japanese Journal of Educational Psychology*, *51*, 86-95.

Lindsay, J. E., & Scott, W. D. (2005). Dysphoria and self-esteem following an achievement event: Predictive validity of goal orientation and personality style theories of vulnerability. *Cognitive Therapy and Research*, *29*, 769-785.

Nolan, S. A., Flynn, C., & Garber, J. (2003). Prospective relations between rejection and depression in young adolescents. *Journal of Personality and Social Psychology*, *85*, 745-755.

Petersen, A. C., Compas, B. E., Brooks-Gunn, J., Stemmler, M., Ey, S., & Grant, K. E. (1993). Depression in adolescence. *American Psychologist*, *48*, 155-168.

Prinstein, M. J., & Aikins, J. W. (2004). Cognitive moderators of the longitudinal association between peer rejection and adolescent depressive symptoms. *Journal of Abnormal Child Psychology*, *32*, 147-158.

Rudolph, K. D., Caldwell, M. S., & Conley, C. S. (2005). Need for approval and children's well-being. *Child Development*, *76*, 309-323.

Rudolph, K. D., & Conley, C. S. (2005). The socioemotional costs and benefits of social-evaluative concerns: Do girls care too much? *Journal of Personality*, *73*, 115-137.

Rudolph, K. D., & Hammen, C. (1999). Age and gender as determinants of stress exposure, generation, and reactions in youngsters: A transactional perspective. *Child Development*, *70*, 660-677.

Ryan, A. M., & Shim, S. S. (2006). Social achievement goals: The nature and consequences of different orientations toward social competence. *Personality and Social Psychology Bulletin*, *32*, 1246-1263.

Sideridis, G. D. (2005). Goal orientation, academic achievement, and depression: Evidence in favor of a revised goal theory framework. *Journal of Educational Psychology*, *97*, 366-375.

Strachman, A., & Gable, S. L. (2006) What you want (and do not want) affects what you see (and do not see): Avoidance social goals and social events. *Personality and Social Psychology Bulletin*, *32*, 1446-1458.

Takahira, M. (1998). Construction of a scale of life events in interpersonal and achievement domains for undergraduate students. *Research in Social Psychology, 14*, 12-24.

Turner, J. E., & Cole, D. A. (1994). Developmental differences in cognitive diatheses for child depression. *Journal of Abnormal Child Psychology*, *22*, 15-32.

Vernberg, E. M. (1990). Psychological adjustment and experiences with peers during early

adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology*, *18*, 187-198.

Westenburg, P. M., Drews, M. J., Goedhart, A. W., Siebelink, B. M., & Treffers, P. D. A. (2004).

A developmental analysis of self-reported fears in late childhood through mid-adolescence: Social-evaluative fears on the rise? *Journal of Child Psychology and Psychiatry*, *45*, 481-495.

Footnotes

[1] The items used in this study included the following item numbers from the original CDI (Kovacs, 1983): 1 (sad mood), 3 (self-deprecation), 4 (general anhedonia), 7 (self-hate), 10 (crying), 11 (low frustration tolerance), 12 (reduced social interest), 19 (somatic concerns), 21 (anhedonia at school), 22 (friendlessness/social isolation), 24 (self-deprecation via peer comparison), 26 (disobedience), and 27 (social problems). Although the suicide ideation item had a high item-total correlation (.47), this item was removed at the request of the teachers.

[2] At the time this study was conducted (from 1999 to 2000), an official organization such as an institutional review board had not yet been established in most faculties of psychology in Japan, including in our affiliation. Therefore, to ensure that this study met the required ethical standards, we carefully reviewed the contents (i.e., purpose, questionnaire, procedure, and design) of this study and asked our peer researchers and the participating school principal and classroom teachers to review and check them in detail. The reviewed contents are consistent with those described in the APA ethical standards. We add that in most Japanese schools, including the school that we considered in this study, the parents of the children gave the school principal the authority to decide whether to allow their children to participate in the research study.

[3] Because social performance-approach goals were highly correlated with social performance-avoidance goals, there was a possibility that multicollinearity might occur. In order to avoid this problem, we conducted another hierarchical regression analysis by removing social performance-approach goals—which do not interact with interpersonal stress to predict

depressive symptoms at Time 2—from the original hierarchical regression analysis. The results

showed the same pattern as the original ones shown in Table 3.

Table 1

Means and Standard Deviations for Variables

	Total	Boys	Girls
Social learning goals	29.64 (4.73)	28.18 $_a$ (4.79)	30.78 $_b$ (4.38)
Social performance-approach goals	19.18 (4.21)	17.84 $_a$ (4.34)	20.23 $_b$ (3.82)
Social performance-avoidance goals	19.62 (4.20)	19.43 $_a$ (4.64)	19.77 $_a$ (3.86)
Negative interpersonal events	10.12 (6.36)	8.41 $_a$ (5.71)	11.46 $_b$ (6.56)
Time1 depression	17.19 (3.64)	17.69 $_a$ (3.50)	16.80 $_a$ (3.73)
Time2 depression	17.67 (3.87)	17.86 $_a$ (3.62)	17.52 $_a$ (4.08)

Note . Means in the same row that do not share subsciripts differ at $p < .05$.

Table 2

Correlations between Variables

	2.	3.	4.	5.	6.
1. Social learning goals	.44 **	.49 **	.18	-.08	-.08
2. Social performance-approach goals		.61 **	.11	-.12	.00
3. Social performance-avoidance goals			.24 **	.13	.21 *
4. Negative interpersonal events				.28 **	.48 **
5. Time1 depression					.55 **
6. Time2 depression					

Note. $N = 116$. * $p < .05$, ** $p < .01$. Gender was coded 1 = boy, 2 = girl.

Table 3

Hierarchical Regression Analysises for Variables Predicting Time 2 Depression (N = 116)

Variable	Statistics at step			Final statistics		
	B	*SE B*		*B*	*SE B*	
Step 1						
Time 1 Depression	.58	.08	.55 **	.46	.08	.44 **
Step 2: Main effects						
Social learning goals	-.15	.07	-.19 *	-.16	.07	-.20 *
Social performance-approach goals	-.01	.09	-.01	.00	.08	.00
Social performance-avoidance goals	.15	.09	.16	.10	.09	.11
Negative interpersonal events	.22	.05	.36 **	.18	.05	.30 **
Step 3: Goal × stress interactions						
Social learning goals				-.03	.01	-.21 *
× Negative interpersonal events						
Social performance-approach goals				-.01	.01	-.10
× Negative interpersonal events						
Social performance-avoidance goals				.04	.01	.41 **
× Negative interpersonal events						

Note. R^2 = .30 for Step 1 ($p < .01$); ΔR^2 = .15 for Step 2 ($p < .01$); ΔR^2 = .07 for Step 3 ($p < .01$). * $p < .05$, ** $p < .01$.

Figure Captions

Figure 1. Effect of the interaction social learning goals × negative interpersonal events on

depressive symptoms.

Figure 2. Effect of the interaction social performance-avoidance goals × negative interpersonal
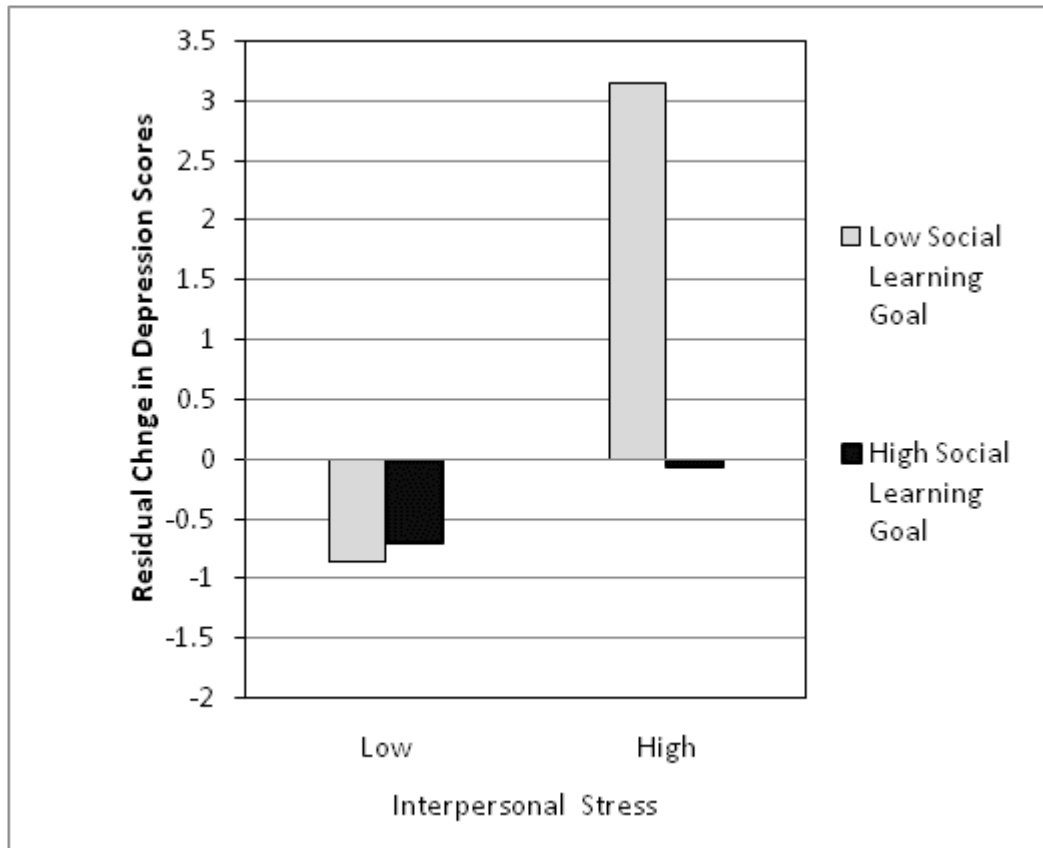
events on depressive symptoms.

Figure 1.

Figure 2.