ATTACHMENT AND MOTIVATIONAL STRATEGIES IN ADOLESCENCE: EXPLORING LINKS

Isabel Soares, Marina S. Lemos, and Cristina Almeida

ABSTRACT

Within the framework of attachment theory and of motivation goal theory, this study explored the relation between quality of attachment strategies and quality of motivational strategies in a sample of young adolescents. Specifically, this study examined patterns of thoughts, behaviors, and emotions as they related to representations of attachment and motivational functioning in situations that challenge or threaten three psychological needs (emotional security, competence, and autonomy). Forty-four students, aged 11 to 14 years, responded to imagined stressful situations in order to: (a) assess attachment strategies; (b) identify and assess students’ motivational strategies in stressful classroom circumstances; (c) assess motivational strategies of students with high and low control and agency beliefs; and (d) examine the relations between attachment and motivational strategies. Four distinct action patterns were identified: flexible action, rigid action, passive behavior, and disorganized behavior. Significant relations were found between control beliefs and motivational strategies, as well as a trend toward relations between attachment and motivational strategies, suggesting that secure adolescents show more constructive motivational strategies and less disorganized strategies when compared to insecure adolescents.

INTRODUCTION

Within the scope of motivational theory, psychological needs are fundamental for understanding human development. The needs for relatedness, for competence, and for autonomy are critical to understanding development and action, namely in challenging and threatening situations (Connell, 1990; Connell & Wellborn, 1991; Skinner & Wellborn, 1994). The idea that individuals play a central role in shaping their

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behavior by selecting and interpreting events and reacting to them, is related to an individual's beliefs about one's interactions with the environment, are more specifically, beliefs associated with the three basic needs: emotional security, perceived competence, and perceived autonomy. Contextual conditions also influence individuals' behavior. Contents may allow (or impose) the satisfaction of these three needs depending on, respectively, the terms of involvement (versus neglect), structure (versus chaos), and autonomy (versus coercion) (Skinner & Wellborn, 1994). Internal working models of attachment, perceived control, and autonomy are viewed as self-system processes associated with these three needs. During development, these three self-system processes are built on the basis of individuals' interactions. Through early interactions with a supportive and sensitive attachment figure and through successful independent attempts, the child will develop a representation of the self as worthy of love, competent, and autonomous, as will it represent the world as responsive, predictable, and allowing freedom. However, these three basic needs may be challenged by such contextual factors as unavailability of the attachment figure, or chaotic and coercive situations. This may result in insecure representations of the self and of the world as well as negative expectations.

While there is extensive agreement about the importance of these three basic needs for behavioral development, the relations among them are still mostly unknown. Although some theoretical hypotheses have been advanced (e.g., Wellborn, 1995), only a few studies (e.g., Maslin-Cole & Spiker, 1990) have empirically explored the dynamics among these needs.

**A Goal Approach to Motivation and Action**

In the context of the present investigation, needs are viewed as key motivational constructs, which give purpose and meaning to behavior and whose influence is not only direct, but mainly mediated by goals. In this sense, we explore the role of behavior finality through analysis of individuals' motivational goals. Goals are conceived of as a cognitive elaboration of needs. Whereas the need concept is vague, generic, and hardly open to empirical examination, goals are specific, concrete, subjective, and susceptible to being more directly evaluated. Our perspective emphasizes the role of goals in determining action (Lemos, 1993).

Generally, needs are related to self-system processes which are reflected in individuals' beliefs. Beliefs related to the needs for competence are control beliefs (expectations about the extent to which one can obtain desired outcomes), and for autonomy are agency beliefs (expectations about the extent to which one has access to the means that produce desired outcomes).
According to organismic perspectives (Ryan, Deci, & Grolnick, 1995; Wellborn, 1992), the need for competence and autonomy is universal and basic to development. The need for competence is evidenced in behaviors such as exploration, curiosity, mastery, and a general attempt at dealing with the environment in a competent way (Harter, 1981; Harter & Connell, 1984; White, 1959). The need for autonomy or for self-determination has been studied in the context of the intrinsic motivation paradigm (deCharms, 1984; Ryan, Deci, & Grolnick, 1995; Harter, 1981) and refers to the wish of experiencing the self as responsible, as the author of one’s own actions. Self-determination allows for the organization of personal development according to one’s own talents and capacities.

The cognitive approach to the study of psychological needs is represented in goal theories of motivation. Goals are viewed as resulting from the cognitive elaboration of needs (Lemos, 1993, 1996). The conceptualization and empirical study of goals is recent and still lacks conceptual clearness. In our study, the term “goal” is equated to intentions, purposes, and motivational focuses.

Nuttin (1980) was the first author to emphasize the role of cognitive motivational goals in guiding and regulating action. He concentrated particularly on the process of goal-setting and planning to attain goals. Within his perspective, the basic needs are general, non-focused, and unspecific. The association of basic needs to action requires a cognitive elaboration that transforms basic motives into more concrete and specific goals, directed to particular objects or situations. Goal elaboration is viewed as an active process of search and construction. Whereas social learning and situational factors may contribute to the elaboration of these specific goals, the subject must creatively reorganize the information in order to adapt the goals to the particular situation.

The process of goal setting is accompanied by the planning of means-ends structures that lead to goal attainment. Within this process, the subject anticipates the means and evaluates the results according to the established criteria (that is, the goal). Besides allowing for goal change after reflection about the means, this process encourages exploration of alternative pathways to goal attainment. In sum, it is suggested that motivated action may be understood in terms of the process of goal setting and planning toward the satisfaction of the basic psychological needs. The cognitive processing of needs also results in the individualization of motivation which is related to the ability of self-development and of self-regulation. In fact, the creation of goals and plans is a personal construction, to which subjects commit themselves by taking the initiative and the responsibility for goal attainment. Nuttin contrasts the internal regulation of behavior with “the motiva-
tional alienation," in which subjects, due to pressures, are led to do or even to wish for things inconsistent with their intentions and perceptions. The inability to transform one's plans into action or to elaborate basic needs into specific goals and plans contribute another form of motivational dysfunction (Nuttin, 1980). Motivated action is related to intentional actions as opposed to automatic behavior, and is based on goal setting and planning (reflection about goals and the adequate means for their accomplishment) as well as adaptation to different situations. This type of intentional action produces an active and personalized involvement, in terms of engagement and reengagement in order to attain the intended goals. In the absence of goals and plans, behavior is automatic, without perceptible self-direction, thus hindering the internal regulation of behavior. Such motivational functioning is not goal oriented and may have negative implications for learning and development, as the subject behaves without any commitment to a personal project. Consequently, the internal regulation of behavior and the personification of motivation are negatively affected, which may interfere with the satisfaction of psychological needs by generating passivity and low goal-striving. In sum, goal setting guides behavior by focusing attention and effort in order to attain the specific goal, thereby diverting the subject away from irrelevant stimuli.

Self-related Beliefs and Motivation

In general, the motivational constructs related to the need for competence are termed perceptions of competence (or perceptions of control) referring to judgments about individuals' access to effective means to attain desired outcomes. Motivational constructs related to the need for autonomy refer to perceptions (and judgments) of self-determination. The need for autonomy has been studied in the context of the intrinsic motivation paradigm (deCharms, 1984; Ryan, Deci, & Grolnick, 1995) and reflects the importance of experiencing the self as the agent of one's own actions. The feeling of owning one's actions promotes self development according to individuals' talents and capabilities.

With reference to development, children construct beliefs about their competence and autonomy by interacting within their social context. Those who come to believe they can attain desired goals (control beliefs) and that they have personal access to the adequate means (agency beliefs), will be more likely to face challenging situations and engage in adequate strategies to achieve valued outcomes. By contrast, children who come to believe they cannot obtain desired outcomes or prevent negative consequences will tend to react in a maladaptive manner, particularly in stressful circumstances.
In educational contexts, these motivational beliefs are of special importance, powerfully influencing learning through promoting or hindering students' willingness to engage in school work. According to Connell and Wellborn's (1991) motivational model of needs, the ways in which the basic psychological needs for competence and for self-determination are fulfilled determines engagement in different activities. When the needs are fulfilled, children feel more competent, and will be more fully engaged. When one of these needs is not fulfilled, children tend to become disaffected and unmotivated. Engagement and disaffection refer to the intensity and quality of the student's involvement in activities. Engagement includes behavioral and emotional components (Skinner & Belmont, 1993). Children who invest in tasks maintain a behavior involvement in learning activities and show a positive emotional tone. They choose the tasks according to their abilities, take initiative when given the opportunity, and show effort and concentration while performing their tasks. They also show enthusiasm, optimism, and curiosity. Disengaged children, on the contrary, are passive, do not strive, and give up easily when confronted by obstacles. They may feel bored, depressed, anxious, or even angry. Engagement produces not only better learning and performance, but the progressive capacity for self-influencing one's own development. Research based on Skinner's model also shows that control and agency beliefs consistently influence performance on achievement tasks (Skinner, 1995).

Attachment and Motivational Systems

Attachment relations have been studied within Bowlby's theory (1969, 1973, 1980). Attachment is a vital process in human ontogeny, not only because it is related to individual survival but because it promotes adaptive development during the entire life cycle (Ainsworth, 1989). The establishment of an attachment relation is viewed as a social-emotional task of infancy that provides the basis for competence and self-efficacy, and prepares the child for the resolution of subsequent developmental tasks in the social-emotional and cognitive domains (Cicchetti, Cummings, Greenberg, & Marvin, 1990; Matas, Arend, & Sroufe, 1978; Suess, Grossmann, & Sroufe, 1992; Thompson, 1999).

The way the attachment figure responds to the child's basic needs in essential for the development of confidence and security in the self and toward the attachment figure, which will be later generalized to other figures and relationships (Bowlby, 1988). When the attachment figure is available, sensitive, and accessible to the child's needs and
thus promotes feelings of security, he/she may be used as a secure base from which the child can explore the environment.

Bowlby recognizes, however, the possibility of other patterns of parental behavior with unfavorable or negative implications for child development, and leading to insecure attachment as evidenced by the avoidance of the attachment figure due to fear of rejection, or by a continuous anxiety in facing the expectation of loss of that figure. Research has shown that the quality of the attachment between the child and his/her caregiver has a meaningful impact on the development of social-emotional competence (Main, Kaplan, & Cassidy, 1985; Weinfield, Sroufe, Egeland, & Carlson, 1999). Feelings of security and control developed within the relationship between the child and his/her attachment figure seem to contribute to emotional regulation, to the development of other social relationships, and to the way the child copes with subsequent development tasks (Grossmann & Grossmann, 1991; Koback, 1999; Sroufe, Egeland, & Kreutzer, 1990; Thompson, 1999). Children who use the attachment figure as a secure base, are able to explore the environment with confidence and security, thus enhancing their competence and autonomy (Grossmann, Grossmann, & Zimmerman, 1999; Main, 1983; Sroufe, 1999) and, most likely, allowing for positive and efficient strategies of motivation. In challenging situations, these children seek proximity and support from the attachment figure, which allows them to return to the exploration of the world. Insecure children do not seem to be able to use the attachment figure as a secure base (Ainsworth, Blehar, Waters, & Wall, 1978); insecure-avoidant children tend to ignore the attachment figure and to concentrate on objects; insecure-ambivalent or resistant children show less competent exploratory behavior and avoid challenging tasks (Ainsworth, 1970; Ainsworth et al., 1978; Main, 1983).

Maslin-Cole and Spieker (1990) analyzed the relation between attachment and motivation, based on two longitudinal studies with toddlers, one with a non-risk sample and the other with a social-risk sample. In general, these studies offered empirical evidence for the influence of attachment security on early motivation. The quality of attachment shows some influence on the toddler's level of motivation, in the sense that avoidance and security of attachment are related to the highest levels of motivation (in contrast to anxious attachment). Maslin-Cole and Spieker (1990) emphasize that there are no clear indications that, over time, secure children have an advantage (compared to the insecure-avoidant group) for development of a longer attention span, are more resilient in the face of challenge, and have greater independent motivation. However, the results do not exclude the idea
that secure children may have more pleasure and gratification in their interaction with objects, and throughout these experiences may develop feelings of competence and motivation.

The transition to adolescence is a critical period for cognitive and emotional development, which might allow a deep understanding of the relations between attachment and motivation. Within the framework of the attachment theory, and of the motivational goal theory, our study is aimed at exploring the relation between the quality of attachment and the quality of the strategies of motivation in a sample of young adolescents. More specifically, our study explores possible relations among patterns of thought, behavior, and emotions, related to representations of attachment and to the motivational functioning in situations that challenge or threaten psychological needs for emotional security, competence, and autonomy. Based on the assumption that, in the face of stressful situations, individuals may try to restore psychological well-being by engaging in cognitive and emotional strategizing, or may give up trying to satisfy their needs, we designed an empirical study which allows us to evaluate and relate the quality of the strategies of attachment and the quality of the strategies of motivation. This research encompasses an important methodological dimension that is reflected in the evaluation of the strategies of attachment and motivation.

OBJECTIVES AND METHODOLOGY

Objectives
Based on the aforementioned conceptualization, our study aimed: (a) to assess attachment strategies in young adolescents; (b) to identify and assess students' motivational strategies in stressful classroom circumstances; (c) to assess motivational strategies of students with high and low control and agency beliefs, and (d) to examine the relation between attachment and motivational strategies.

Participants
Participants were 44 sixth-grade students, 22 boys and 22 girls aged 11 to 14. They were selected from a larger sample of 409 students from a school in the north of Portugal. Based on the Portuguese version (Lemos & Gonçalves, 1995) of the CAMI instrument (The Control, Agency and Means-ends) (Skinner, Chapman, & Baltes, 1988), two groups of students were defined: Group 1 consisting of 20 low-control students, and Group 2 consisting of 24 high-control students.
Measures and Procedures

Assessment of attachment strategies. A Portuguese version of the Separation Anxiety Test (SAT) was used (Almeida, Soares, & Martins, 1996), based on the original version by Hansburg (1972), the versions by Klagsburn and Bowlby (1976), and by Resnick (1991a,b). The Portuguese version of the SAT includes a set of twelve pictures, adapted from Hansburg’s (1972) original drawings. The pictures are presented to all subjects in the same order, as follows:

1. A teenager living permanently with his/her grandparents and without his/her parents.
2. The teenager is being transferred to a new school class.
3. The teenager and his/her parents are moving to a new neighborhood.
4. The teenager is leaving his/her mother to go to school.
5. The teenager is leaving his/her parents to go to camp.
6. After an argument with the mother, the father is leaving.
7. The teenager’s brother is a sailor leaving on a voyage.
8. The judge is placing the teenager in an institution.
9. The parents go away for two weeks, leaving the teenager with a sitter.
10. The teenager’s mother is being taken to the hospital in an ambulance.
11. The teenager and the father are standing at the mother’s coffin.
12. The teenager is running away from home.

For each picture, two open-ended questions are asked: “How does the boy/girl in this picture feel about this situation?” and “What does the boy/girl in the picture do next?” All interviews are audiotaped and transcribed verbatim. This method is based on the assumption that the quality of the attachment strategies may be inferred by analyzing how the teenager deals with these attachment experiences and discusses them in terms of a (in)coherent organization of his/her feelings, thoughts, and behaviors (Main et al., 1985).

The analysis and classification of the Portuguese version of the SAT is an adaptation of the method proposed by Resnick (1991a,b) which was developed based on the Method for Analyzing the Adult Attachment Interview by Main & Goldwyn (1984). Based on nine rating scales—emotional openness and vulnerability, dismissing/devaluing of attachment, self-blame, resistance/withholding, preoccupied anger, displacement of feelings, anxiety (optimism/pessimism), coherence of transcript and solutions—three attachment categories may be identi-
fied: secure/autonomous, insecure/dismissing of attachment, and insecure/preoccupied with attachment relationships (for more details see Resnick, 1991a,b).

Students assigned to the category of “insecure/dismissing of attachment” generally show difficulties in identifying feelings, particularly in the most stressful pictures. The teenager in the picture is seen as unaffected by the separations. When talking about parents or friends, they reveal a high level of rejection or depreciation of these relationships. Some subjects are not as explicit and, instead, are very resistant to discussing situations, giving very short answers deprived of affective content. They focus on their strengths to deal with the situation, viewing their parents and/or friends in terms of their instrumental qualities.

Subjects classified in the “secure/autonomous” category show emotional openness and freedom to talk about what the teenager in the picture feels when facing adversity. They recognize the importance of attachment relationships and see separation or loss of attachment figures as critical situations giving rise to feelings of vulnerability, sadness, and loneliness. Although there are differences within this group at the level of emotional expression and emotional understanding, their interviews show coherence in terms of the ability to integrate positive and negative aspects of the pictured situations and clear interest in the re-establishment of the contact with the parents as a solution to the separation.

Teenagers classified as “preoccupied with attachment relationships” show a high level of anger or negative affect, when discussing separation from attachment figures, and are unable to justify them. They oscillate between positive and negative aspects involved in the pictured situations and present contradictory solutions, either revealing high passivity, or destructive solutions. A preliminary study was carried out aimed at assessing the inter-judge agreement using the SAT’s scales in a sample of 27 subjects, aged 11 to 14 years. The agreement found was 87.5% (Almeida, 1998). For the present study, the inter-judge agreement was calculated based on a group of interviews randomly selected—30% of the interviews from Group I and Group II; an 86% of agreement was found.

Assessment of the Motivational Strategies

Due to lack of empirical methods of evaluation of students’ motivated behavior in stressful classroom situations, a semi-structured interview was developed, as well as the respective methods of codification and classification. This measure was named “Interview about motivational
strategies in the classroom context for preadolescents” (Lemos & Almeida, 1995). Motivational strategies are defined as patterns of action composed of the interaction of different forms of activity, including goals, behaviors, and emotions. The term “pattern” allows for the detection of multiple configurations of motivational strategies. The quality of the strategy is defined on the basis of general indicators of efficient action and with reference to the particular classroom context.

The interview includes ten vignettes describing classroom situations which challenge or threaten the needs for competence and/or autonomy. These situations were selected based on the motivational literature about events that represent obstacles to the fulfillment of feelings of competence and self-determination, such as failure; high ambiguity; lack of resources, support, or information; and conformity pressure (Connell & Wellborn, 1991; Ryan, Deci, & Grolnick, 1995; Wellborn, 1995). The configuration of the situations was adapted to the typical Portuguese classroom context, portraying a student (girl or boy) facing specific stressors, as follows:

1. The teacher makes inconsistent demands on the students. One day she says that students should study using their textbook; the next day she says that the students should use their classroom notes to study. This student can’t figure out the right thing to do.
2. This student is surprised. He/she had a poor grade on a test, but had expected a much better result.
3. Although this student has the correct answer, the teacher doesn’t accept it, because the student used a different approach to complete the task.
4. This student is very bored. The lesson is not interesting.
5. This student is not able to achieve passing grades. Everyone knows he/she is one of the lowest achievers in the class.
6. This student wishes to participate, but the teacher never picks him/her.
7. This student is working very hard on a project. He/she is very enthusiastic about doing a good job. However, the teacher interrupts, and tells the students to store away their materials.
8. The teacher has already explained the topic twice, but this student still doesn’t understand.
9. The teacher is about to go on to a new topic, which is totally unfamiliar to this student.
10. This student must carry out an assignment, but the teacher gives no explanation on how to do it.
The students were individually interviewed concerning the emotions of the student described in each vignette: “What does the student feel in this situation?”; The character’s behavior: “What will he/she do next?”; His/her goals: “What for?” Without being intrusive, the interviewer explored how the student sees, reflects upon, and acts in the situation as well as the emotions expressed. All the interviews were taped and fully transcribed. Content analysis was used to identify students’ motivational strategies (for a detailed description, see Lemos, 1996, 1999). A theory-driven rating system was defined to examine the students’ responses. This system of classification combines five dimensions to judge the motivational quality of the students’ strategies: intentionality, behavior, goal-behavior coherence, adaptability, and emotions.

Intentionality reports on the initiation and sustainability of engagement in activities (Ford, 1992; Nuttin, 1980; Ryan et al. 1995). According to the system developed by Lemos (1993, 1996) this dimension assesses whether students elaborate means-ends strategies, and classifies the answers into two categories: goal-oriented behavior (when the student defines a goal and a plan of action to attain it), and non-goal oriented behavior, in its absence. The level of the student’s behavioral activity was also considered for the evaluation of motivational quality of action when facing obstacles (Bandura, 1977; Skinner & Wellborn, 1994; Weiner, 1986). Accordingly, students’ answers were classified into two categories: active behavior and passive behavior. The active category represents behavioral and/or cognitive determination, effort or concentration in the search for a solution to the problem. The passive category represents lack of commitment and involvement (behavioral and cognitive). Notice that “active behavior” includes both problem-focused and emotion-focused strategies, provided the student clearly tries to deal with the situation. It also comprises not only strategies of approach, but of avoidance, as long as the strategy is justified. Goal-behavior coherence refers to the global adequacy of the activities (plan) to reach the intended result (goal). Incoherence refers to the answers in which there is inconsistency between the goal and the behavior. Whenever responses do not fit this criterion they are classified as coherent. Adaptability assesses whether students’ responses consider the requirements of the particular situation. Maladaptive strategies are assigned to responses disregarding ethical and classroom norms. Other responses are classified as adaptive. The students’ answers are classified as “emotionally overwhelmed” when the subject expresses strong, generalized, and unrestrained negative feelings, and as “emotionally responsive” when these criteria are not present. The
classification of the motivational strategy is assigned to the interviews as a whole, rather than to each cartoon strip. Inter-rater agreement was reached through a random selection of 16 interviews (four boys and four girls from each sample group), and was 87.5%.

RESULTS

Attachment Strategies
The majority of the students (59.1%) presented a secure strategy, and most of the insecure ones were classified as dismissing (27.3%). We also determined which of the nine rating scales significantly differentiated between the secure and insecure groups. Results presented in Table 1 show that all the scales contributed toward distinguishing the attachment groups, with the exception of the rating scale of preoccupied anger, which is close to statistically significance ($p = .053$).

Motivational Strategies
Based on combinations of the five dimensions of classification—intentionality, behavior, goal-behavior coherence, adaptability, and emotions—four motivational strategies were defined. These include flexible action, rigid action, disorganized behavior, and passive behavior.

Generally, the flexible and rigid strategies are considered constructive, both clearly revealing an active intentional goal-oriented behavior. Through setting goals and planning courses of action to restore well-being in the face of stressful situations presented in the cartoon strips, these subjects show goal-valuing. They acknowledge the emotional impact of the situation, try to solve the problem, and offer solutions that are adaptive to the requirements of each situation. Their strategies are coherent and orderly. In general, such characteristics suggest that these students use an internal form of behavior regulation.

The differences between flexible and rigid strategies lie in the quality of the behavior dimension. Flexible students reveal cognitive-behavioral involvement, engaging in a process of reflection whereby they seek information, evaluate, re-evaluate, interpret the situation, and consider alternatives. They try to coordinate different goals and define priorities. Whereas they may abide by external demands, they also seem to protect their intentions and their feelings of competence and of self-determination. Apparently, they accept rather than are restrained by external pressure, as they identify and explain it. In contrast, students using a rigid strategy strive for the goal in an active
Table 1

Differences Between Secure and Insecure Groups on the Rating Scales for Attachment Security

<table>
<thead>
<tr>
<th>Scale</th>
<th>Secure</th>
<th>Insecure</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Emotional openness</td>
<td>7.307</td>
<td>0.679</td>
<td>5.333</td>
</tr>
<tr>
<td>Dismissing of attachment</td>
<td>2.269</td>
<td>0.777</td>
<td>3.944</td>
</tr>
<tr>
<td>Self-blame</td>
<td>6.423</td>
<td>1.331</td>
<td>5.000</td>
</tr>
<tr>
<td>Resistance</td>
<td>6.692</td>
<td>1.319</td>
<td>5.666</td>
</tr>
<tr>
<td>Preoccupied anger</td>
<td>8.576</td>
<td>0.808</td>
<td>7.611</td>
</tr>
<tr>
<td>Displacement of feelings</td>
<td>7.653</td>
<td>0.561</td>
<td>6.666</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5.307</td>
<td>1.407</td>
<td>3.722</td>
</tr>
<tr>
<td>Coherence of transcript</td>
<td>7.000</td>
<td>0.979</td>
<td>5.333</td>
</tr>
<tr>
<td>Solutions</td>
<td>7.192</td>
<td>0.849</td>
<td>5.777</td>
</tr>
</tbody>
</table>

but rigid way, which means that strategies are not differentiated according to different situations. Their reaction reveals an over-regulated, introjected involvement, showing active behavioral engagement but insufficient cognitive elaboration. For example, the solutions they present are mostly insensitive to the situation's cues, and they are perseverant and self-punitive. These subjects are restrained by the situation, with an apparent unsatisfactory fulfillment of their needs.

Students with a passive strategy behave without a real goal; apparently their behavior is mechanical and repetitive, without revealing a full grasp of the situation. These students do not show involvement or any determination to solve the situation, as if they do not acknowledge any potential threat. Their speech is poor, short, simplistic, and reduc-
tive of the complexity of the situation. Their behavior is not supported by means-ends structures. Apparently the students only elaborate non-instrumental means since they cannot explain how these means are going to lead to goal achievement. They keep at some activity, but no proper action is considered that is related to the problem. They suggest irrelevant solutions such as “to wait,” “to do his/her best.” From an emotional point of view, they may experience mild feelings, but never take the initiative to minimize or prevent the problem.

The disorganized strategy is characterized mainly by being incoherent and/or maladaptive. Subjects may state vague goals or jump from one goal to another, never completing a course of action. Their behavior is confused, impulsive, and even aggressive. There are signs of abrupt and intense negative emotions.

In our study, a passive strategy was found in 36% of the students, with 23% showing a disorganized strategy; 25% of the students reveal a flexible strategy, and 15.9% a rigid strategy.

**Relations between Motivational Strategies and Control Beliefs**

The relationship between motivational strategies and control beliefs is statistically meaningful ($p < 0.05$), as shown in Table 2. The flexible strategy appears in a larger proportion in Group 2 (90.9%) than in Group 1 (9.1%), and the rigid strategy appears in a larger proportion in Group 1 (71.4%) than in Group 2 (28.6%). In short, almost all subjects with a flexible strategy have high control beliefs, and the majority of the subjects with a disorganized strategy show low control beliefs.

**Relations between Attachment and Motivational Strategies**

The relationship between attachment and motivational strategies is not significant ($p = 0.088$) as shown in Table 3. However, secure adolescents show more constructive motivational strategies and a smaller proportion of disorganized strategies than do insecure adolescents.

**DISCUSSION**

**Attachment Strategies**

Based on the Portuguese Version of the Separation Anxiety Test, it was possible to identify distinct attachment strategies. These are inferred from the way the students discuss the pictured separations from the attachment figure, how they organize their feelings and thoughts, and how they are engaged in the search for solutions to these critical attachment experiences (Kobak & Sceery, 1988; Resnick, 1991a,b). Se-
Table 2
Motivational Strategies of Students with Low (Group 1) and High (Group 2) Control Beliefs

<table>
<thead>
<tr>
<th>Motivational Strategies</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible</td>
<td>1 (5.0%)</td>
<td>10 (41.7%)</td>
<td>11</td>
</tr>
<tr>
<td>Rigid</td>
<td>5 (25.0%)</td>
<td>2 (8.3%)</td>
<td>7</td>
</tr>
<tr>
<td>Passive</td>
<td>8 (40.0%)</td>
<td>8 (33.3%)</td>
<td>16</td>
</tr>
<tr>
<td>Disorganized</td>
<td>6 (30.0%)</td>
<td>4 (16.7%)</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>20 (100.0%)</td>
<td>24 (100.0%)</td>
<td>44</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 8.758, p = .032$

Table 3
Relations Between Motivational and Attachment Strategies

<table>
<thead>
<tr>
<th>Motivational Strategies</th>
<th>Secure Attachment</th>
<th>Insecure Attachment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructive</td>
<td>13 (50.0%)</td>
<td>5 (27.8%)</td>
<td>18</td>
</tr>
<tr>
<td>Passive</td>
<td>10 (38.5%)</td>
<td>6 (33.3%)</td>
<td>16</td>
</tr>
<tr>
<td>Disorganized</td>
<td>3 (11.5%)</td>
<td>7 (38.9%)</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>26 (100.0%)</td>
<td>18 (100.0%)</td>
<td>44</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 4.862, p = .088$
cure and insecure strategies are inferred through the organization of language, thought, attention, and memory when discussing relevant attachment experiences (Main et al., 1985). When the students are confronted with situations that challenge their attachment needs and may give rise to anxiety and fear of separation from attachment figures, the attachment system will be activated and expressed through language in a narrative form. The quality of the attachment strategies may be inferred by analyzing how the student deals with these attachment experiences and discusses them in terms of a (in)coherent organization of his/her feelings, thoughts, and behaviors (Main et al., 1985).

Our students reveal more secure attachment strategies than do insecure students. These results are very similar to those found in the preliminary study (Almeida, 1998), as well as in other Portuguese samples (Soares, 1996). However, in contrast to the findings presented by Resnick (1991a), our study shows a higher proportion of insecure strategies in a sample of 31 children between the ages of 11 and 13.

All the rating scales allowed us to differentiate the secure from the insecure groups except for the scale of “preoccupied anger.” In general, the expressions of anger are limited and focused only on the separation situations and on the people involved; for example, “angry at the parents leaving.” Cultural and educational factors as well as their young age, may contribute to these “soft” emotional expressions. Resnick (1991a) also found significant differences between secure and insecure groups, based on the rating scales of the SAT, with exception of the scales of self-blame, withholding/resistance, and preoccupying anger. However, it should be noted that the Portuguese version of the SAT includes more situations of separation and are different from those proposed by Resnick (1991b), which may have allowed a more powerful inter-group differentiation. In short, the way each student confronts him/herself and reflects on and evaluates separations from attachment figures, seems to constitute an indicator of the quality of his/her internal models about the self and the attachment figures, and, consequently, of the quality of his/her attachment organization. The secure youngsters seem to evaluate the situation of separation as less threatening to their need for attachment than do those who are insecure. At least they do not show the same mechanisms found in the dismissing or in the preoccupied groups. They are able to present a coherent strategy to deal with stress through a positive relation between behavior and emotion, according to Skinner and Wellborn’s perspective (1994). They can easily recognize that the situation challenges their need for attachment and they try to find internal or external resources to face the situation in a positive manner. The insecure/dismissing subjects
try to divert their attention from their feelings as a strategy, which prevents them from being emotionally involved in a critical situation. A way to deal with the emotional stress elicited by separations may be to deny the importance of the attachment experiences and relationships in their lives. They show a moderate level of coherency when discussing their feelings and behaviors at the level of attachment, revealing few contradictions between what they feel and do, and how they justify the situations. The preoccupied group shows high levels of anxiety and a "heightening" of their attachment system which contrasts with the vagueness of their emotional expression. They are often confused by the pictures and not sure about the parents' motives or behavior. They show high ambivalence and vulnerability in face of separation from attachment figures, but they are not able to present a constructive solution for the situation.

These three attachment groups show in a clear way how affect regulation and self-confidence in dealing with separation are related to the quality of attachment strategies (Kobak & Sceery, 1988; Wright, Binney, & Smith, 1995).

**Motivational Strategies**

The interview, designed to evaluate the quality of students' motivational strategies in stressful classroom situations through a set of vignettes, stimulated students' relevant statements by eliciting experiences related to competence and self-determination. This method allowed for the detection of four distinct strategies: flexible, rigid, passive, and disorganized. Each of these motivational strategies has different implications for task engagement and motivational development.

Flexible students are able to face challenges to their feelings of competence and of autonomy and to deal with them positively. This capacity requires positive perceptions of one's competence as well as some degree of personal determination. These subjects reveal an autonomous type of action (Ryan et al., 1995), by orienting their own behavior according to personalized goals, and elaborating adequate means-ends strategies to attain them (Ford, 1992; Nuttin, 1980; Ryan et al., 1995). In sum, they reveal several essential characteristics for an active and continuous involvement in learning and, consequently, good academic performance.

Students with a rigid strategy also show intentional goal striving, although apparently using controlled rather than autonomous forms of action. Although these students are able to satisfy their competence
needs, they seem to devalue autonomy needs. Since both needs are important for engagement in school achievement and for development, these students might be at a slight disadvantage. Their strategy seems to reflect an “introjected” regulation (Connell & Ryan, 1984; Ryan et al., 1995), or “motivational-alienation” (Nuttin, 1980). These concepts describe a motivational functioning characterized by tension and internal conflict, namely through fighting for goals that are not fully self-integrated. Although they reveal behavioral investment, these students rigidly stick to one course of action, and their persistence is largely based on guilt-avoidance. This type of student often behaves according to what he/she think is expected, but seldom experiences learning as an interesting activity. Under these circumstances, self-esteem will depend on success and, as a consequence, instances of failure may hinder or even block investment.

Students with a passive strategy seem to successfully commit themselves to activities which are not part of more global projects. Such a form of dealing with stress is hardly compatible with self-regulation and with assuming responsibility for one’s performance and development (Nuttin, 1980). Their behavior suggests that they act like “pawns” (DeCharms, 1984) or that they have learned not to strive for goals. Generally these students will probably show disengagement and little interest in learning. This type of behavior does not allow them to satisfy the needs for competence and for self-determination. Wellborn (1995) emphasizes that these students will tend to disinvest or to give up on the fulfillment of psychological needs.

A disorganized strategy is dysfunctional and inadequate since the satisfaction of psychological needs for competence and for self-determination are seriously compromised and adaptation endangered. Contrasting with the strong wish and active struggle to appear competent and autonomous, students with a disorganized strategy show disoriented and inefficient action. Frequently, they use processes that are debilitating, such as, devaluing the activities, questioning the teacher’s authority, systematically attributing their failures to external factors, blaming others or even being aggressive. In the interviews with these students an unrealistic perception of control not associated with adequate means is often apparent. They become intensely upset in stressful situations, but they cannot find a way out. Their strong negative feelings seem to block the capacity for organizing a strategy to solve the problem. In terms of personal development, these youngsters may be at a great disadvantage because their strategies tend to perpetuate school difficulties. Within this scenario, conditions are created that are likely to lead them to lose interest or to give up trying to feel competent and self-determined.
Concerning the implications of these strategies for learning and development, it would be interesting to empirically evaluate, in future investigations, the consequences of adopting a flexible, rigid, disorganized, or passive strategy. Whereas flexible and disorganized strategies predictably lead to school success and failure, respectively, the same is not so clear as to rigid and passive strategies, which have more unpredictable repercussions. In general, the typical strategies of these two groups of students do not fill their autonomy needs satisfactorily, and may even hamper their development. Students with passive strategies develop few reflective skills and act without much intention. However, they are able to keep “on task” and probably attain some important goals, even if these may be ill-defined and impersonal. The instability of active and personal investment in the elaboration of goals and plans exhibited by these students, has also been associated with deficits in responsibility for one’s actions and for internal behavioral regulation (Lemos, 1993; Nuttin, 1980). It is also possible that for some of them, the situations were not really stressful. In that case, their behavior might reflect automatic over learned behavior rather than passivity. Future research to clarify this issue should assess students’ assessments of stressful circumstances. Students with a rigid strategy may have a better chance to achieve academically. Their capacity for goal-setting and planning for competence will certainly allow them an oriented action toward seeking success and avoiding failure. Problems may arise, however, in situations which demand initiative and autonomy. Under these circumstances, performance may be affected by emotions, such as fear, tension, pressure, and anxiety. Patrick, Skinner, and Connell (1993) have emphasized that autonomy may be the key to understanding students who are behaviorally involved in the task, but become anxious or upset. Both students with passive and rigid strategies might be risking personal development and social/emotional adjustment, especially because the school and teachers tend not to be aware of their difficulties.

Relations Between Motivational Strategies and Control Beliefs

As expected, there was a clear association between level of perceived control and control and motivational strategies. Students with a flexible strategy have high perceptions of control; that is, they are confident they will attain the desired results and feel they have access to the means required for goal achievement. In situations that challenge or threaten their needs for competence and self-determination, their high control beliefs seem to help them deal with the situation in a positive manner. These beliefs seem to support involvement in strategies that
reveal interest, optimism, negotiation, and commitment, as well as self-initiated and self-directed action.

In contrast, subjects with a disorganized strategy show low control beliefs, which may, in part, explain the type of strategy they adopt. It is suggested that low perceived control in achieving highly desired goals may negatively affect the capacity to mobilize and organize resources.

Most of the students with rigid strategies also showed low control beliefs. The lack of flexibility might reflect a defensive strategy toward threats associated with low perceived control. However, this type of strategy seems more functional than that of disorganized students. For rigid students, low perceived control apparently leads to the repeated use of readily available strategies. This may partly protect their feelings of competence by enhancing the possibility of success, or at least the avoidance of failure.

In general, students with high control beliefs demonstrate good strategies. However, some students with high perceived control were classified as having a passive strategy. In these cases passivity does not derive from low outcome expectation or low self-efficacy, but seems more directly related to the issue of autonomy. In the face of coercive situations, these subjects seem to give up self-determination and initiative. Their actions seem constrained, restricted to a few fixed pathways, suggesting low personalization (Ryan et al., 1995; Nuttin, 1980) and leading to controlled forms of behavior regulation. In short, it is suggested that without personally valued goals, control beliefs are not sufficient for overcoming stressful situations.

**Relations Between Attachment Strategies and Motivational Strategies**

Although the theoretical model of attachment does not clearly explain the relation between attachment and motivational strategies, it is plausible to assume that the quality of attachment may have meaningful implications for individuals' development and for the quality of motivational behavior (Maslin-Cole & Spiker, 1990). In the motivational literature, these relationships have been addressed only conceptually, suggesting an interdependence among the satisfaction of the three basic psychological needs for competence, autonomy, and relatedness. Our empirical examination of the relation between attachment and motivational strategies suggests that secure students demonstrate better motivational strategies at school than do insecure students.

Students with a secure strategy showed a smaller proportion of disorganized motivational strategies when compared to those who are
insecure. In contrast, students with insecure attachment strategies exhibit less flexible motivational strategies. About two-thirds of flexible students reveal secure attachment strategies, and about two-thirds of the disorganized students reveal insecure attachment strategies.

These results seem to support theoretical assumptions about attachment. Youngsters with a secure attachment strategy can deal with separation situations with confidence in themselves and in their attachment figures, and are more able to cope constructively with the problem, and to re-establish contact with these figures. According to Maslin-Cole and Spieler (1990), these subjects learned in the context of their relationships with attachment figures how to regulate their emotions in difficult situations and how to feel secure enough to explore the environment. Their involvement and the support received from the attachment figures may contribute to the development of high levels of perceived control and autonomy, which will allow them to deal positively with challenge/threat situations to meet the need for competence and self-determination. In contrast, most students with insecure attachment strategies display disorganized motivational strategies. In this case, a common pattern seems to underlie both (attachment and motivation) strategies, including lack of co-ordination and incoherence between behaviors and emotions, hindering the satisfaction of psychological needs in the relational and motivational domains. These youngsters have difficulty in controlling their feelings when they face obstacles to satisfying their needs of attachment, competence, and self-determination.

The passive motivational strategy seems to be compatible with the secure strategies as well as with insecure strategies. Secure students would be expected to show less passive strategies (cf. Maslin-Cole & Spieler, 1990). However, Skinner and Wellborn (1994) indicate that the subject may experience different levels of threat about different basic psychological needs, in a rather independent way. This suggests the possibility that some subjects may be able to behave adaptively at a social-emotional level, and display less adequate strategies at the motivational level. Moreover, the classroom atmosphere may also contribute to the emergence of passive strategies in secure students. If the classroom structure does not foster experiences of personal causality (de Charms, 1984), students may feel that their activities and even their achievements are not their own responsibility, thus prompting them to give up goal setting and planning may result in adopting a more passive attitude, even though, in less externally constrained circumstances they may show more initiative. Although most insecure students showed poor motivational strategies, some reveal construc-
tive strategies. This finding may be in line with the conclusions pointed out by Maslin-Cole and Spieker (1990); some insecure subjects seem to find a compensation mechanism due to their unsatisfied need of being attached and close to the other, by investing in an active and determined way in academic achievement.

In short, secure subjects, globally, show more constructive strategies, particularly flexible strategies, in comparison to those who are insecure. Insecure students present more disorganized strategies. However, many secure subjects display passive strategies and some insecure subjects display constructive strategies. Factors associated with the classroom environment and the operation of compensatory mechanisms may explain these findings. The educational system seems to foster students' passivity (Lemos, 1993). Frequently, competence and self-determination are poorly encouraged in favor of good academic achievement. The idea of compensatory mechanisms is frequently referred to in the literature on stress and coping. In their motivational approach to coping, Skinner and Wellborn (1994) acknowledge that it is possible to feel, for example, threatened in the attachment domain but not in the competence or self-determination domains. This assumption implies the existence of different cognitive processes associated with each of the three needs, which will be reflected in the quality of action taken in situations that threaten each need.

Conceptualizing human behavior in terms of psychological necessities allowed us to form an empirical scheme for evaluating and examining the relationships between attachment and motivational strategies. We assumed an exploratory approach in this study, considering that the literature about attachment and motivation did not deeply explore the relationship between the attachment quality and the quality of motivational functioning in youngsters.

REFERENCES


