

## **Changes in students' coping with stress and uncertainty during the process of information seeking and writing a research paper : the contribution of attachment style / Tova Goldman**

### **Abstract**

The technological advances and the development of academic electronic resources: databases, catalogs and electronic journals frequently cause anxiety and feelings of uncertainty among students who have to hand in assignments and use library electronic resources.

A person's attachment style is pointed out in many research studies as one of the most significant factors that contributes to a man's ways of coping under stress. According to the theory of attachment the baby's and child's primary attachment experience to his mother or to a significant other creates internal models about significant others as responsive and available in times of need and about the self as worthy of love and care. A secure infant/child who trusts his mother to be responsive and available forms a sense of attachment security characterized by positive expectations about others' availability and positive views of the self as competent and valued. Secure infants don't hesitate to leave their mother for a while and explore the world. They trust their mother's availability in times of distress. When significant others are not always responsive to one's needs proximity seeking fails to relieve distress. As a result the child develops doubts about the caregiver's accessibility and about himself as being worthy of love. He fears to explore the world and clings to his mother. A child who gets no attention and his caregivers are not available avoids seeking proximity for fear of being disappointed. He prefers to be self-reliant and develops negative representations of others (Bowlby, 1969, 1973, 1988). These distinctions formed three different attachment styles: 1. The secure style is defined by a feeling of self-worth and confidence in the availability of attachment figures, comfort with closeness, interdependence and trust. 2. The anxious-ambivalent style is characterized by a wish for closeness, but insecurity about others' responsiveness and about himself as worth of love and care. 3. The avoidant style is characterized by insecurity in others' intentions and preference for emotional distance and self-reliance (Ainsworth, Blehar, Waters & Wall, 1978). On the basis of these distinctions about a man's trust in himself and others Bartholomew and Horowitz (1991) provided prototypic descriptions of four attachment

styles: 1. The secure style is characterized by trusting others' being responsive and supportive and by a positive view of himself as worthy of support. 2. The anxious-ambivalent style doubts his self-worth, but regards others highly and seeks their help. 3. The fearful-avoidant style has negative representations of self and others. He doesn't seek closeness because of fear of being rejected. 4. The dismissive-avoidant style doesn't trust others, but has a high view of himself. He is self-reliant and avoids interdependence as a way of self-defense (Bartholomew & Horowitz, 1991).

Attachment styles affect ways of coping in times of stress. Lazarus & Folkman (1984) emphasize the contribution of personal resources to man's ways of coping with stressful situations. A person who appraises his resources as sufficient copes by focusing on the problem; he expects successful results and interprets his coping as a challenge. However, an individual who doubts his abilities might feel threatened by the demands and as a result will try to calm himself by focusing on his emotions instead of trying to face and solve the problem, or might even avoid coping at all and thus ignore the problematic situation. One who doubts the good-will of others will avoid seeking help. This theory of coping focuses on man's appraisal of self and of the environment and is thus related to the attachment theory which likewise emphasizes man's internal resources that depend greatly on his trust of others for support and of himself as worthy. This trust contributes to his perception of the situation as a challenge or threat, to his coping by focusing on the problem, on his emotions, on others' support, or on avoidance and procrastination. Man's internal resources affect his emotional regulation, his self-efficacy, his cognitive flexibility and sometimes determine his success in fulfilling tasks and assignments (Ainsworth, 1969, 1978; Bowlby, 1969, 1973, 1988; Lopez, Mitchell & Gormley, 2002; Lopez, 1996; Mikulincer, 1997; Mikulincer & Florian, 1998; Mikulincer & Shaver, 2007).

The present research examines the contribution of the attachment style to the students' ways of coping when using library resources, retrieving information and writing research papers. Research studies dealing with information behavior and information search point out students' feeling of uncertainty while writing a research assignment. Research studies identified different sources of library anxiety: 1. The physical size of the library. 2. Lack of knowledge about where things are located. 3. Lack of knowledge about using catalogs and library resources. 4. Emotional barriers which cause students to regard librarians as unresponsive. 5.

Anxiety over using the English language searches and resources (Mellon, 1986; Bostick, 1992; Shoham & Mizrachi, 2001).

The present study assumes that there are correlates between attachment style characteristics and students' ways of coping while retrieving information and using academic databases. Some of these common features are: self-confidence, self-efficacy, hope and optimism, cognitive flexibility, constructive thinking, emotional regulation, curiosity and exploration and help seeking.

The aim of the present study is to examine the correlation between efficient information retrieval when using electronic resources in the academic library and the secure style coping characteristics as opposed to and compared with the anxious- ambivalent's, the fearful-avoidant's or the dismissive-avoidant's ways of coping. Likewise, we examine the contribution of a supportive, encouraging and efficient environment that integrates systematic information literacy instructions on students' success in writing academic research papers and on the insecure student's acquiring the secure student's ways of efficient coping by emotional regulation and by developing a creative and constructive way of thinking (at least in class or library when helped by the librarian or while using electronic resources in the library).

In order to examine these assumptions the librarian took part in the "bibliography instruction" course of first year students and in the "research methodology" course of second year students of the Social Sciences Faculty in one of the Universities in Israel. The librarian taught information seeking strategies and research paper writing in a classroom with a computer for each student for hands-on training and a teacher's computer for demonstrating electronic resources use in order to help students acquire knowledge of and familiarity with pathways of information science and resources.

The librarian tried to find a "formula" that would intensify the student's feeling of comfort in the library while using electronic resources. The assumption was that the student's self-confidence which is essential for his academic success could be achieved by constructive, systematic instructions.

The purpose of the present study was to examine the contribution of attachment styles to the ways of coping in stressful encounters with the library resources and to develop efficient instructions to promote a well-equipped and well-trained life-long learner who knows how to use information retrieval strategies and how to organize a well-constructed research academic assignment. Moreover, the presence of the librarian in the above mentioned courses enabled the observation of the contribution of these systematic instructions to the

improvement of the ways of coping of both the secure and insecure students and to the improvement of their information retrieval and organization.

We tested different aspects of student's ways of coping: whether the student has a secure attachment style or whether he is anxious-ambivalent, fearful-avoidant or dismissive-avoidant, whether the student's attachment style has any implications on his appraisal of the information retrieval process as a threat or a challenge, whether he copes by focusing on the problem, on assistance, on his emotions or by avoidance and procrastination. We examined whether there is any correlation between the student's attachment style and his feelings of library anxiety which is manifested by barriers with the staff, knowledge of the library and difficulties using the English language. We also examined whether the student's attachment style affected his efficacy and efficiency in information retrieval and research paper writing. Moreover, we tried to find out how a systematic instruction affects and changes the student's appraisal of his encounter with the electronic resources and academic assignments and his ways of coping and information retrieval approach: Does he have a high sense of self-efficacy? Does he use efficient information retrieval strategies? Does he integrate new information in his research work? Does he know how to evaluate the information he retrieved with cognitive flexibility and control? Does he know how to create the proper focus of the ideas and theories so that the main ideas are made clear? Is he competent enough to change search terms and ideas according to the updated information he retrieved?

The students completed questionnaires in three different stages: 1. Two weeks after the academic year started and after they visited the library and received an explanation about the location of the books and the use of the library catalog. 2. A month after the beginning of the year- after they had received a ninety minutes' instruction about electronic resources. This instruction did not include hands-on training. 3. Two weeks before the academic year ended- after they had attended a systematic course of information literacy instruction with hands-on training, sitting each in front of a computer and practicing till they were well trained. The librarian organized an encouraging environment where he proved to be responsive and available providing prompt feedback and explanations. In each of the three stages mentioned above the students completed the following questionnaires: Ways of Coping Questionnaire (Parkes, 1984, see Appendix 2), The Cognitive Appraisal Questionnaire (Lazarus & Folkman, 1980, see Appendix 3), Library Anxiety Scale (Bostick, 1992; Shoham & Mizrahi, 2001, see Appendix 4), Self-Efficacy in Information Retrieval and



Research Work (according to research studies in information behavior and seeking, see Appendix 5). Two weeks before the academic year ended the students completed the Contribution of the Information Literacy Instruction Questionnaire (see Appendix 6).

In the beginning of the year the students completed the ECR (Experiences in Close Relationships) that assesses attachment style (Brennan, Clark & Shaver, 1998). Students completed this questionnaire only once, because they claimed that their answers had not changed. The answers to the ECR questionnaire helped diagnose the student's attachment style and compare it with questionnaires 2, 3, 4, 5 i.e. it helped test the correlation between the attachment style and ways of coping, appraisal, library anxiety and self- efficacy in information retrieval and organization. By comparing the students' answers in all three stages the researcher/librarian could check their progress and the changes in their ways of coping and search skills and strategies. Likewise, we could observe the contribution of a welcoming learning environment with a responsive librarian to the students' affect regulation, to their cognitive flexibility and self-efficacy using online resources in class and in the library.

The librarian's perspective and follow-up became even more comprehensive and multi- dimensional by using qualitative research techniques: observations, interviews, feedbacks and narratives. The interviews took place in the above mentioned three different stages. The librarian interviewed students of all different attachment styles: secure, anxious-ambivalent, fearful-avoidant, and dismissive-avoidant. The librarian took part in the course also as an observer and tried to get an appropriate insight and understanding of the students' ways of coping and their difficulties. At the same time the librarian tried to separate himself from the situation observed in order to consider anew the significance of the students' academic experiences. The librarian's participation in the course by teaching retrieval strategies enabled the right interaction with the students. It fostered their trust and disclosure which are essential for maintaining the proper quality of their answers to the questionnaires and interviews. A lot of implied information was noted by observing students' work and searches. By the interviews students conveyed their points of view and made them aware of their formerly unarticulated perceptions, thoughts and understanding.

Many retrieval exercises were done in class. The students' answers to these exercises emphasized the fact that they advanced from a state of helplessness when asked to use electronic resources to a state of knowing

how to use skilled and proficient ways of information seeking strategies. The students' narratives explicitly pointed out the great significance of library literacy comprehensive instructions.

The research assumptions were confirmed by both qualitative and quantitative research results. It was confirmed that different attachment styles differ in their ways of coping and in the information seeking strategies they use. The research results demonstrated a correlation between the attachment dimensions of anxiety and closeness/avoidance and ways of coping. The higher the level of anxiety, the greater was the individual's use of help seeking and emotion focused coping strategies and the greater was his appraisal of the situation as a threat. The higher the level of attachment avoidance, the greater was the coping characterized by using denial, procrastination and by avoiding help seeking. Moreover, it was ascertained that the attachment style contributes to the student's information seeking efficiency in the following variables: avoiding superficiality, integrating new information, knowing how to evaluate relevant information, affect regulation, cognitive flexibility and clear formulation of ideas and flexible use of search terms. The secure students used a greater variety of terms and information seeking techniques and felt more self- efficacy when retrieving and evaluating relevant information for their assignments. These results correlate with research studies according to which secure people feel curiosity and explore the world even in states of uncertainty, because the working model of the secure base enables them to take risks while exploring and processing information. The anxious-ambivalent doubts his capacity to deal with unexpected threats like contradicting information that doesn't fit well into the existing knowledge. The fearful-avoidant and the dismissive-avoidant might avoid exploring under situations of uncertainty and build a wall between themselves and the world. However, their wish for independency (especially that of the dismissive-avoidant) may cause them to seek information in order to avoid interaction with and help from others (Mikulincer, 1997).

The assumption that a comprehensive instruction of information literacy in a welcoming and supportive environment improves all students' ways of coping and information processing was confirmed. By comparing the answers to the questionnaires in the three different stages, the efficiency of the instruction was confirmed. All students improved their ways of coping. Their feelings of challenge increased and they were all more capable of focusing on the problem and on assistance rather than on emotions and procrastination. Moreover, the difficulties in using the library resources and in communicating with the staff decreased. They learned

how to use electronic resources, to avoid using irrelevant and superficial information and how to integrate new information by the appropriate formulation of ideas.

The research model was examined through regression analyses. The analyses confirmed the correlation between the independent variables; attachment style and information literacy instruction and the dependent variables: ways of coping (focusing on the problem, on emotions, on assistance and on avoidance), ways of appraisal (feelings of challenge or threat), library anxiety (knowledge of the library, barriers with the staff and difficulties using the English language), and self-efficacy and efficiency when retrieving information and writing research assignments. The correlation between attachment dimensions anxiety and avoidance/closeness was confirmed in all three stages. In the first two stages two additional regressive correlations were found between library anxiety and self-efficacy and the feeling of threat and library anxiety. In stage one the analysis demonstrated regressive negative correlation between library anxiety and information retrieval self-efficacy and proficiency. The higher the level of library anxiety, as reported by students, the lower was the feeling of self- efficacy when retrieving information.

In stage two an additional regressive correlation was demonstrated between the feeling of threat and library anxiety, i.e. the student's appraisal according to which the demands of the environment were above his capacities caused a feeling of threat which intensified library anxiety. Moreover, as demonstrated by the regression analysis, the higher the level of threat and library anxiety, the lower was the students' self- efficacy and retrieval capacities. In stages 1 and 2 the student's appraisal of his capacities and his information seeking efficiencies were affected not only by his attachment styles but also by whether or not he acquired proper knowledge of how to use the library and its resources. Thus, lack of suitable information literacy instruction in the beginning of the year (stages 1 and 2) caused threat and library anxiety which had implication on information retrieval and self-efficacy and efficiency. Adequate knowledge and skills which intensify the feelings of self-efficacy and motivation are often acquired by education and by a supportive, encouraging way of instruction (Bandura, 1977, 1982, 1993, 1997, 2002; Mikulincer & Shaver, 2007; Rogers, 1956, 1992). As a result of a systematic instruction and a lot of hands-on training, the level of threat and library anxiety decreased in stage 3 and the dimensions of attachment closeness/avoidance and anxiety remained the main independent variables that contributed to the students' ways of coping. Time and instruction were thus

the second independent variable that correlated with students' ways of coping while seeking information and writing a research paper.

The assumption that there is no difference between first year and second year students was partly confirmed. Second year students faced much greater requirements than first year students. Moreover, as they loudly declared in class they did not have adequate knowledge of information retrieval systems to meet these demands. Consequently, they felt more significantly threatened than first year students and their level of coping by focusing on their emotions was significantly higher than that of the first year students. The assumption that there is no difference between first and second year students in the level of barriers with the library staff was confirmed. However, the second year students faced significantly more difficulties as to the knowledge of the library and its resources. It might be due to the larger gap between the demands on the one hand and the students' knowledge and information literacy on the other hand. The assumption that there is no significant difference between first and second year students in their information retrieval efficacy was confirmed. However, significant differences were demonstrated in second years students' higher wish to avoid superficiality and in their significantly higher cognitive flexibility. This result correlates with other research studies that prove that the analytic ability and cognitive flexibility of students is increased in the second year of their academic studies when they get a wider perspective of various theories which enables their insight, cognitive flexibility and capacity to integrate various ideas and theories by formulating a proper synthesis (Whitemire, 2003). These results do not confirm the assumption that there is no difference between first and second year students, but they do demonstrate the assumption that a systematic instruction has great importance in developing proper coping skills when retrieving information and writing a research paper. The absence of a course of information literacy systematic training in the first academic year increased the gap between the academic demands and the students' skills and caused the students' feeling stress, threat and inefficient performance.

The conclusion that both first and second year students of all attachment styles report high levels of difficulties in using the English language in all stages of the year must raise educators' attention. Much of the information needed for research work is retrieved by using English language search terms, databases and resources. A lot of research studies, articles and books are written in the English language; therefore educators should do their best to improve students' English.



The contribution of the present study is reflected in several ways: 1. The present research points out the variables that are common to both the attachment theory and to theories in the field of information science: looking for assistance, communication with the staff, feelings of anxiety and threat, affect regulation, cognitive flexibility, avoidance and procrastination, and confirms the correlation between students' attachment style and their ways of coping and information processing. 2. The librarian took part in the first and second year course of "Bibliographic Instruction" and "Research Methodology" and tested how hands-on training, responsiveness, and availability of the instructor could improve students' affect regulation, cognitive flexibility and efficient ways of coping. Thus the contribution consists of research of the correlation between attachment styles and students' ways of coping and development of proper information literacy instruction and implementation of that instruction which proved to be highly successful and significant for students' academic achievements.

In conclusion, two pivotal assumptions were confirmed in the present study: 1. The correlation between the students' attachment style and ways of coping in the process of information retrieval.

2. The beneficent effect of a systematic course of information literacy with hands-on training and with a class where there is a computer for each student and the instructor is responsive and supportive. The encouraging learning environment intensifies the self-worth of the anxious-ambivalent students who usually doubt their capacities and the dismissive-avoidant can break the walls of self-defense and high self-reliance when instructors prove to be available and encouraging.

As a result some important conclusions were drawn:

1. The process of acquiring information literacy must be planned systematically and taught over the course of the academic year. A ninety minutes instruction is not enough.

2. The instruction should include meta-cognitive training. Students should be trained how to use positive self-talk which intensifies the students' self-efficacy, hope, optimism, motivation and challenge. Students should be aware of their thoughts, feeling and actions in each of the stages of information retrieval and processing (Kuhlthau, 2004), they should realize the gap and the bridge they have to build by collecting relevant information for their assignment (Dervin, 1999), they should know how to use accurate search terms and concise queries and be aware of the need to shift ways of thinking and search terms according to the shifts in the information retrieved (Spink, 2007).



3. The students' optimal training and progress is realized by developing cognitive flexibility in a welcoming environment that provides a safe haven to which students can return in times of distress and by a responsive instructor who encourages exploration and provides proper training of information retrieval techniques and research work performance.

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