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The Impact of Written Disclosure through Journal Writing on Adjustment in Young Adolescent Girls: Theoretical and Clinical Implications

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Cette thèse intitulée :

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Résumé

Plusieurs auteurs ont démontré que la révélation de soi chez les adultes a des effets psychologiques et physiques bénéfiques. De façon générale, la recension des écrits montre que, l'adaptation mesurée par des pré et post tests est significativement meilleure chez les participants exprimant leurs pensées et émotions, suite à la tenue d'un journal comparativement aux groupes témoins. Le modèle d'inhibition-confrontation (IC) (Pennebaker et Susman, 1988) s'avère le plus propice, puisqu'il tient compte de l'amélioration d'adaptation chez un individu.

L'efficacité de la tenue d'un journal et le modèle d'IC n'ont jamais été évalués chez les jeunes adolescents. Cette thèse s'y intéresse en explorant dans cette population, à l'aide d'un journal, l'efficacité de la révélation de soi, de l'anxiété situationnelle et de l'anxiété de trait ainsi que les implications théoriques liées à la théorie d'IC. L'impact de la tenue d'un journal sur les scores d'internalisation et d'externalisation et les liens entre les théories de l'adaptation et la théorie d'IC sont aussi discutés. Finalement, une analyse descriptive des journaux est discutée afin d'illustrer les thèmes qui peuvent encourager les clients à verbaliser leurs pensées en situation clinique.

Soixante filles âgées de 12-13 ans ont complété des journaux descriptifs (DJ) et émotionnels (EJ). Trente autres jeunes filles ont constitué le groupe de contrôle. Les analyses multivariées révèlent qu'écrire un EJ ou un DJ a diminué l'anxiété. Le concept de confrontation, présent dans la théorie n'a pu être confirmé puisque les groupes expérimentaux ne différaient pas dans leur niveau d'anxiété. Possiblement, les journaux joueraient le rôle d'exposition aux stimuli anxiogènes présents dans la désensibilisation systématique. De plus, une corrélation positive entre la fréquence de l'emploi du « je »

et la diminution d'anxiété et une seconde corrélation entre la fréquence des mots cognitifs et les bas niveaux d'anxiété, supportent l'élément cognitif retrouvé dans la théorie d'IC. Cette étude ne peut donc confirmer la notion de confrontation émotionnelle, mais permet de confirmer les notions de restructuration cognitive et le concept d'inhibition.

Les participantes classées dans le groupe EJ montrent également une baisse dans les scores d'internalisation comparativement à celles classées dans des groupes de contrôle ou DJ. Cela suggère qu'une diminution dans l'internalisation peut être accomplie par une stratégie d'approche semblable à la confrontation. Par contre, les scores d'externalisation n'ont pas été influencés significativement par la tenue de journaux, ce qui semble indiquer que le degré de généralisibilité de la théorie d'IC ne peut être appliqué à tous les concepts psychologiques.

Les thèmes les plus fréquemment abordés dans la catégorie d' « intérêts personnels » étaient l'école, la maison, la réussite et les préoccupations corporelles. Les différences retrouvées entre les groupes EJ et DJ semblent indiquer que des mécanismes psychologiques différents prédominent quand les participants écrivent d'un point de vue descriptif ou émotif et les implications théoriques sont discutées. De plus, les cliniciens qui interviennent pour faciliter l'expression de mots cognitifs ou émotionnels pourront garder à l'esprit les thèmes les plus souvent abordés.

En conclusion, cette thèse évalue l'utilisation de journaux et permet d'évaluer les théories connexes pour les appliquer aux jeunes filles adolescentes. De plus, elle suggère aux cliniciens des moyens pour maximiser les bienfaits de la révélation de soi.

Mots Clés: **Révélation de soi, journaux, jeunes adolescentes, adaptation, anxiété, internalisation, externalisation**.

Summary

Research suggests that disclosure by adults has beneficial psychological and physical effects; measures of adjustment were significantly better in groups that disclosed their thoughts and feelings through journal writing compared to control groups in pre and post comparisons. Compared to other models of coping, the Inhibition-Confrontation (IC) theory (Pennebaker and Susman,1988) better accounted for improvements in adjustment.

The efficacy of journaling and the IC theory has not been evaluated with young adolescents. This thesis assesses links between the efficacy of self-disclosure through journaling on State and Trait anxiety in young adolescent girls and the ensuing theoretical implications. Then, the impact of journaling on internalization and externalization scores in this population and the links between Coping theory and the IC theory is examined. Finally, a descriptive analysis of the journal entries is discussed to establish clinically relevant themes which could encourage clients to verbalize thoughts in the most beneficial manner.

Sixty 12-13 yr-old girls were randomly assigned to complete entries in either an emotional (EJ) or a descriptive journal (DJ). Thirty additional girls were placed in a control group. Multivariate analyses of the pre and post measures of adjustment were compared. Results revealed that writing either a DJ or an EJ reduced anxiety. Confrontation as described in the IC theory was not supported because girls did not differ in anxiety levels across experimental groups. An alternate explanation to the results involves systematic desensitization. That is, journals could be a form of exposure to anxiety-causing stimulus. Furthermore, the positive correlations between the first

person singular with the lower levels of anxiety in the EJ group as well as between the cognitive words and decreased anxiety levels, support the cognitive component of the IC theory. Therefore, this study shows no support for emotional confrontation, but rather a cognitive restructuring and supports the concept of inhibition.

Participants in the EJ group also showed a greater decrease in internalization scores than those in the DJ group or in the control group suggesting that a decrease in internalization can be achieved by approach coping through disclosure (similar to confrontation). However, externalization scores were not significantly affected by journaling. Results encourage caution as to the generalizability of the IC theory for young adolescents because the theory cannot be applied indiscriminately to all psychological concepts.

The most frequently mentioned subjects within journals for the personal concerns category were school, home, achievement, and bodily preoccupations. The differences between the EJ and DJ conditions seem to indicate that different psychological mechanisms predominate when writing from a descriptive point of view or an emotional point of view. Therapists asking questions to facilitate the expression of either affective or cognitive words should note these differences so as to encourage their clients to use more of the desired words, thus enhancing their coping.

In sum, results assess the use of journaling and allow fine-tuning of relevant theories with respect to young adolescent girls as well as providing suggestions for clinicians as to how maximize clinical benefits.

Key Words: Written disclosure, journaling, early adolescence, coping, anxiety, internalization, externalization.

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Abbreviations

DJ	Descriptive Journal
EJ	Emotional Journal
IC	Inhibition-Confrontation theory
LIWC	Linguistic Inquiry and Word Count
STAIC	The State-Trait Anxiety Inventory for Children
YSR	Youth Self-Report

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Introduction

> *"We found, to our greatest surprise at first, that each individual hysterical symptom immediately and permanently disappeared when we had succeeded in bringing clearly to light the memory of the event by which it was provoked and in arousing its accompanying effect, and when the patient had described that event in the greatest possible detail and had put the affect into words."* (Breuer & Freud, 1957).

Contemporary psychologists would refer to the above "effect" as disclosure. This study is concerned with examining self-disclosure through writing. Although in the past diary writing and journal keeping has been the source of little empirical attention, a few researchers have investigated this form of personal disclosure in an attempt to uncover the "meaning" behind various experiences such as love, suicide and religious experience (e.g., Hall, (1904), Douglas, (1967), and Clark, (1929) respectively). Building on both personal observations and those of others, like the work of Freud (cited above) and Karen Horney's conception of "self", Jourard began explicitly studying self-disclosure. He believed that, "If we are to learn more about man's self, then we must learn more about self-disclosure-its conditions, dimensions and consequences." (Jourard, 1959, p. 506). Jourard (1959) also introduced the notion that self- disclosure is a factor in both physical and mental health.

Subsequent research has shown that disclosure by adults has beneficial effects. Specifically, studies have revealed that groups that disclosed their thoughts and feelings using journaling techniques, also benefited physically and psychologically when compared to control groups. Researchers have empirically tested the journal writing

paradigm in a number of studies and have found that writing about stress leads to an immediate increase in negative mood (e.g., depression and anxiety), but subsequently leads to a wide range of psychological and health benefits. A sampling of such research includes the following: (Cameron & Nicholls, 1998; Esterling, Antoni, Fletcher, Margulies, & et al., 1994; Petrie, Booth, Pennebaker, Davison, & et al., 1995; Smyth, 1999). A meta-analysis of this literature indicated that expressive written emotional disclosure generated a mean effect size of $r = 0.47$ standard deviations across all outcome measures (Smyth, Stone, Hurewitz, & Kaell, 1999). However, it is important to note that other studies discussed below failed to show these effects.

Self-disclosure is an interpersonal process by which individuals share knowledge about themselves with others. As previously mentioned, Jourard felt that the primary goal of self-disclosure was the maintenance of one's mental health. He believed that, "through self-disclosure, people are able to validate one another's ...thoughts and feelings and understand more fully how we conform to the world around us" (Duck & Pittman, 1994, p. 687).

Jourard was suggesting that through self-disclosure, individuals must attend to events, suggesting that it leads to attentional coping strategies. Studies have suggested that such strategies (e.g. confrontation, cognitive restructuring and problem solving) have generally been found to be more effective for long term coping. It addition, using distraction strategies (e.g., inhibition, denial, repression and suppression) when faced with significant or traumatic events result in detrimental effects. For instance, Suls and Fletcher (1985), conducted a series of meta-analyses, involving 43 studies, finding that overall, avoidance indicated better outcomes initially, but with time, attention was

associated with more positive outcomes. Additionally, studies using both adequate sample sizes (ranging from 20 to 42 participants) and comparison groups, such as Kilpatrick, Resick, & Veronen (1981), Pennebaker & Beall (1986), Pennebaker, Colder, & Sharp (1990), and Pennebaker, Hughes, & O'Heeron (1987), have also positively linked attentional strategies to adjustment while distraction strategies have been negatively linked to adjustment.

The emotional retelling of significant events through disclosure with the goal of favouring adjustment has long been advanced by clinicians and researchers. It is believed that focusing on emotional aspects of an event allows for an enhanced assimilation and resolution of the event through either a process of purging/catharsis (Freud, 1910) or through the act of emotional disclosure (Greenberg & Stone, 1992; Roth & Cohen, 1986). For instance, Ichiyama, Colbert, Laramore, Heim, & et al., (1993) examined the relationship of self-concealment to psychosocial adjustment in 200 female and 144 male college students. They found that Self-concealment was significantly correlated with self-reported anxiety, depression, shyness, and negative self-esteem. However, the notion that emotional expression is necessary *and* sufficient as an aid in adjustment was challenged. Notably, Greenberg and Safran (1989) refer to various studies which suggest that although the re-experiencing of strong emotion is necessary, a restructuring of the emotional response is also needed in order for change to occur. Although Pennebaker and Beall (1986) had initially proposed a process which might account for increased physical and psychological adjustment, the notion of restructuring was later integrated by Pennebaker and Francis (1996), who found through text analyses, that the use of positive emotion words and changes in words suggestive of

causal and insightful thinking (cognitive change) were linked to adjustment. The presumption that there are benefits associated with the expression of emotions by clients having experienced a significant event is generally supported by clinicians. Two clarifications are needed when clinicians espouse this idea: First, it must be determined that disclosure is in fact beneficial. Then, a rationale explaining the process subsequent to emotional expression (e.g., emotional relearning, cognitive restructuring) must be determined in order to establish the conditions under which the process can produce beneficial results.

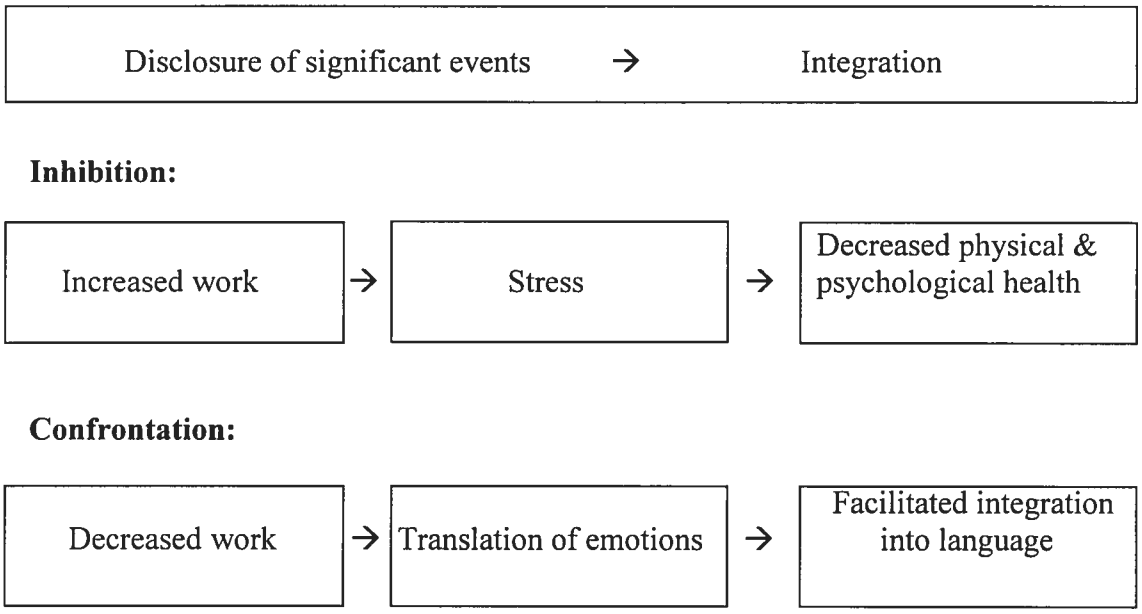
The Inhibition-Confrontation theory was proposed by Pennebaker and Susman (1988). After having noted that, in addition to research in lie detection in the 1960s hinting that individuals who actively hold information back have increased skin conductance, there seemed to emerge a negative correlation in the animal literature between behavioural inhibition and health. There were also studies indicating that people who failed to talk about major life stressors and were more prone to a variety of health problems (Pennebaker & Susman, 1988). This theory, which incorporated the notion of the importance of emotional expression, better accounted for improvements in adjustment found in the literature when compared to other models of coping. The efficacy of journaling and the Inhibition-Confrontation theory have been assessed with regards to both young and older adults but have yet to be evaluated with young adolescents. The results (discussed later) in the adult literature and the likelihood that individuals may begin journaling during adolescence indicate that young adolescents may benefit from self disclosure through writing.

Pennebaker and Susman (1988) proposed a comprehensive approach to coping. The authors, drawing from the psychophysiological literature (e.g., Selye (1978)) proposed that the process of disclosure involves two opposing processes: inhibition and confrontation. With regards to inhibition, the theory states that when a traumatic event is inhibited, the following sequence occurs: a) Inhibition causes increased amounts of work, b) increased work causes stress, and c) stress is detrimental to physical health and psychological adjustment. Individuals must be able to assimilate complex events, some of which may be traumatic, so as to make sense of the world and of their own experiences. In order to accomplish assimilation, thoughts and feelings must be translated into language. Berkowitz, and Troccoli (1990) showed that using language to convey emotions alters inchoate feelings and may reduce the perceived intensity of these feelings. Specifically, they suggested that when individuals become more aware of their unpleasant emotions, they engage in a higher level of cognitive processing, which then allows them to gain a different perspective, thus resulting in a reduction in the perceived intensity of the emotion. The second premise of the theory suggests that confrontation occurs by translating events and related emotions into language. It therefore involves an individual's attempt to organize and understand an upsetting or novel experience. The Inhibition-Confrontation theory states that in order to facilitate adjustment and the assimilation of an experience, individuals must confront the significant event that is causing the distress. The theory also states that occasionally, it is difficult to confront such an event because one may fear negative consequences. For example, individuals disclosing a distressing state such as loneliness may be perceived more harshly by their peers.

Accordingly, some ways of confronting, that is, translating events into language must be developed in order to cope with a significant event. Two ways of translating such events are to verbalise or to write them. Pennebaker and Beall (1986) suggest that talking or writing about difficulties can prevent certain health problems. That is, the act of disclosure allows one's feelings and thoughts to become more concrete, thus enabling understanding of the disclosed event. Support for the Inhibition-Confrontation approach to coping was demonstrated in several studies (Pennebaker & Beall, 1986; Pennebaker et al., 1990; Pennebaker & Susman, 1988).

According to the Inhibition-Confrontation model, the disclosure of emotions is beneficial in two ways: First, disclosure decreases the amount of work ordinarily required by withholding information, and second, disclosure entails the translation of emotions into language, thus facilitating integration. Pennebaker (1997) summarised past research investigating the effects of disclosure, through writing, talking, and even acting, on physical health and psychological adjustment. Among these, journal writing is frequently used as a therapeutic tool, as evidenced by experiments with adults (Greenberg & Stone, 1992; Petrie et al., 1995). In these experiments, the basic parameters of talking and writing associated with health improvements were explored. The benefits and the duration of these effects were also discussed, leading to the conclusion that the therapeutic effects of disclosure, especially through writing, should be examined. Furthermore, it was suggested that the implications for treatment should be explored. Figure 1 is a representation of the Inhibition-Confrontation model proposed by Pennebaker and Susman (1988).

Figure 1. Inhibition –Confrontation Model (Pennebaker & Susman, 1988)



Concordant evidence for the effects of disclosure

In addition to the evidence for the Inhibition-Confrontation model, previous research is convergent with the premise that the disclosure of significant events is beneficial. As discussed above, detrimental effects occur when inhibition takes place. Conversely, there are also positive effects when disclosure takes place. These effects have been noted in various studies and are manifested through physical and psychological improvements.

For instance, an early study by Weinberger, Schwartz, and Davidson (1979) examined the relationship between coping style and stress level. Physiological responses used to indicate stress levels, such as heart rate and muscle tension, were recorded in 40 male college students separated into three groups, while they completed behavioural

tasks. If inhibition were detrimental to psychological adjustment, those individuals who had a repressive coping style would be more stressed than those who did not use repression as a coping style. A repressive coping style would indicate that an individual frequently relied on inhibition as a coping mechanism. Significant differences were found in both the physiological as well as the behavioural tasks (reaction time, content avoidance, and verbal interference) and the authors concluded that that a repressive coping style was associated with higher stress when compared to subjects who tended to repress less.

More evidence for the psychological benefits of disclosure emerged in Pennebaker et al.'s (1990) study comprised of 130 participants who were assigned to write either about coming to college or about superficial topics for 20 min on 3 days. The study demonstrated that disclosure, in the form of writing, resulted in fewer reports of homesickness, loneliness, and anxiety. Similarly, Greenberg and Stone (1992), Pennebaker et al. (1987) and Petrie and al. (1995) have all noted positive long-term mood improvements. Also, ruminations tend to be alleviated by disclosure (Wegner & Zanakos, 1994).

There is evidence that positive physical and psychological symptoms are associated with disclosure. Investigators have found that writing about traumatic experiences produces a decrease in physician visits, improves work performance, and enhances immune functioning. For instance, in a study by Esterling et al. (1994), 57 healthy seropositive undergraduates completed a personality inventory, provided blood samples, and were randomly assigned to write or talk about stressful events, or to write about trivial events, during 3 weekly 20 minute sessions, after which they provided a

final blood sample. All groups showed significant differences, with the participants who verbalised the stressful events showing the most improvement, while those who wrote about trivial events evidenced no improvement. Content analysis indicated that the verbal/stressful group achieved the greatest improvements in cognitive change, self-esteem, and adaptive coping strategies.

Similarly, McClelland (1979) examined the effect of suppressed anger as related to hypertension. Participant's disposition to be assertive or angry was measured by using activity inhibition as the measure of the tendency toward self-control. In 3 samples consisting of 127 men, 235 male college freshmen, and 78 male college juniors, high-activity inhibition was associated with higher blood pressure when compared to the participants classified as low-activity inhibition. This longitudinal study found that for male subjects in their early 30's, inhibition significantly predicted elevated blood pressure and signs of hypertensive pathology appearing 20 years later.

Equally, Pennebaker and O'Heeron (1984) surveyed 19 spouses of suicide and accidental death victims concerning their health and coping strategies approximately 1 year after their spouse's death. Results show that the more participants discussed their spouse's death with friends, and the less that they ruminated about the death, the fewer were the increases in health problems reported. A significant negative correlation was also found between confiding and ruminating. The participant's self-reported number of close friends was controlled for, thus eliminating a potential confound. The authors concluded by suggesting that the suicide of a spouse is associated with increased health problems, but that confiding in others appears to play a central role in the coping and health process.

Sloan and Marx (2004) have examined whether changes in psychological and physical health outcomes are associated with the written disclosure paradigm and whether the hypothesis that the principles of exposure account for the beneficial effects observed are valid. Forty-nine women participating in an introductory psychology course were randomly assigned to either a written disclosure condition or a control writing condition. Reactivity was examined using both subjective and physiological measures. Participants assigned to the disclosure condition reported fewer psychological and physical symptoms at follow-up compared with control participants. The authors also suggest that the comparatively younger age of the sample population may have yielded a larger effect because they had not yet developed chronic problems. This would also suggest that a sampling of young adolescents may also respond to the writing paradigm. Other studies have shown increased hepatitis B antibody levels, and an increase in natural killer cell activities (Christensen, Edwards, Wiebe, Benotsch, & et al., 1996; Pennebaker et al., 1987).

Other studies have found that people who easily disclose emotions achieve better health outcomes (e.g., King, Emmons, & Woodly, 1990). However it is unclear if the opposite is also true: Do people who generally inhibit their emotions and then decide to stop their inhibition also benefit from improved health outcomes? More specifically, it is difficult to determine if it is the emotional expression of emotionally expressive people that influences health rather than other factors such as a different or less stressful ways of viewing the world.

Limitations of the theory

Within the inhibition confrontation theory, the premise is made that disclosing significant events is a natural response, therefore, that suppressing the emotional response to this event requires work and that this work increases stress level. For example, correlational studies have demonstrated that there are maladaptive consequences suppressing certain thoughts (e.g., increased intrusive thoughts (Lane & Wegner, 1995)), of failing to disclose stressful experiences (e.g., associated with poorer long-term health (Pennebaker, Barger, & Tiebout, 1989)), or of low expressiveness (e.g., greater negative mood (King & Emmons, 1990). The issue of causality however was not addressed in these correlational studies.

Furthermore, although studies have linked physiological responses such as electrodermal activation (indicative of general arousal therefore increased stress) with the inhibition of emotions (Pennebaker & Chew, 1985), they have not determined whether electrodermal activation is actually a good measure of arousal. For example, some studies support the above relation; Participants demonstrated increased skin conductance when trying to suppress facial reactions (Gross & Levenson, 1993). Conversely, some studies found greater electrodermal activation when exaggerating facial expressions. It can be argued, however, in this last study, that the facial expressions were not indicative of the participants' true feelings because they were inhibiting their reaction, thereby explaining the apparently contradictory results. However, contrary to the theory, other studies have shown increases in electrodermal activity during the use of negative emotional words rather than during inhibition (Hughes, Uhlmann, & Pennebaker, 1994). The authors suggest that inconsistencies in

the testing protocol may explain the incongruous results. The role of inhibition therefore remains unclear.

The data from disclosure studies may also be explained by the premise that expressing emotion after a significant event may lead an individual to be less affected by subsequent similar events. Studies have shown that individuals asked to react strongly to situations or to attend more closely to their mood have shown the opposite results (Morrow & Nolen-Hoeksema, 1990; Teasdale & Fennell, 1982). That is, participants in these studies reported a higher level of distress and negative thoughts. Participants in the disclosure studies also reported increased negative mood but only temporarily. They later reported amelioration in mood. In fact Mendolia and Kleck (1993) found that participants attending to their negative reactions to a film also reported higher levels of distress but upon reexposure to the film, reported significantly less distress than a group who initially attended to factual information in the film rather than to their emotions. The decreased level of distress would therefore concord with the findings in the disclosure studies (consistent with the Inhibition-Confrontation Theory) that reflect a positive change in mood after confronting significant and distressing events. Cognitive restructuring inherent in the Confrontation stage of the theory could explain the results since the participants would be able to reappraise their behaviour before reexposure.

According to Foa and Kozak (1986) and Lang, (1984) reexposure provides an opportunity to recast the emotional memory. Emotions must be reexperienced for a long enough period to allow the arousal to decrease. If the emotion is reexperienced but the arousal does not decrease during the time of exposure, the person's emotions will be intensified. This may explain why certain self-disclosure studies failed to show

improvement or showed a worsening of mood (e.g., Roth, Dye, & Lebowitz (1988)). Perhaps the participants evoked past intense feelings but only for a short period of time, never allowing the arousal to decrease. This would suggest that disclosure studies should permit the participant enough time for reappraisal. In fact a meta-analysis of Smyth et al., (1998) conducted a review of the literature, selecting 13 studies in which there was an experimental manipulation of written emotional disclosure pertaining to significant and stressful events, measures of health and overall functioning, and effect sizes. They found that this writing task lead to significantly improved health outcomes in healthy participants. More importantly, the relation between written emotional expression and health was found to be moderated by a number of variables including time. That is, the longer the experience lasts, the stronger are the effects of disclosure. Further studies should therefore allow for a significant amount of time in order to determine whether the exposure hypothesis is a valid one.

Other limitations of the studies included the fact that most disclosure studies did not control for initial differences in health status or psychological status. Therefore, a ceiling effect may exist for adjustment where well adjusted people with good coping skills do not improve on the psychological measures.

The need to study varying populations and age groups

It is important to note that different participant populations (i.e., cancer patients, prison inmates, male college students and female college students) showed different reactions to emotional disclosure. Smyth et al. (1998) also found that gender was a mediating variable affect the effect size. The effectiveness and the benefits of journal

writing have been demonstrated through several studies. For instance, participants in treatment for Post traumatic Stress Disorder and anger management showed amelioration linked to emotional expression (Deffenbacher, McNamara, Stark, & Sabadell, 1990). There may be varying theories to account for the observed effects. One way to determine the appropriateness of the explanatory theories is to determine the concordance of the available theories with theories of clinical constructs such as anxiety. Therefore, it would be important to assess the efficacy of emotional expression and self-disclosure in different populations as well as different presenting problems.

The therapeutic effects of journal writing have not been extensively assessed with respect to children and adolescents. Muris, Meesters, and Gobel, (2002) examined the impact of written disclosure compared to the cognitive component of cognitive behaviour therapy (discussed below). Also, Reynolds, Brewin, and Saxton (2000) explored the hypothesis that repeated description of negative events will have beneficial effects on measures of mental health, school attendance and performance in 191 children aged 8-13 years. Participants were assigned to one of three conditions: Writing about negative events, writing about non-emotional events, and a non-writing control group. Participants in all groups were seen four times during a single week and were then followed up after two months with measures of school performance and mental health. There was little evidence of a specific effect of emotional disclosure, however there was a general reduction in symptom measures, indicating that children may have benefited from their involvement in the study. Findings indicated that it is both feasible and potentially valuable to give children opportunities to engage in discussion about sources of stress and their reactions to them. However, Reynolds et al. (2000) explored

the effects of disclosing negative events only. The impact of disclosing both positive and negative events was therefore not assessed.

The link between disclosure and psychological adjustment may also be less direct. For example, adolescent girls generally appear more willing to discuss their feelings with friends and parents (Papini, Farmer, Clark, Micka, & et al., 1990) whereas boys seem more willing to report feelings of anger (Brody, 1984). Furthermore, some studies have shown a link between emotions and coping. For instance, a study involving children in groups aged from 6-8 years, 8-10 years, and 10-12 years, by Eisenberg, Shepard, Fabes, Murphy, and Guthrie (1998) examined the relation between teachers' and parents' reports of shyness and coping. Avoidant coping, shyness, internalizing behaviours and negative emotions were all positively correlated. An approach style of coping, similar to confrontation was negatively correlated to shyness, and internalizing behaviours. Some studies have indirectly examined journal writing. For example, Muris, Meesters and Gobel (2002), studied the cognitive component of cognitive behaviour therapy relating to anxiety problems through a writing intervention with twenty-four 8-12 year-olds. Results showed that levels of anxiety decreased substantially for both writing and non-writing (cognitive intervention) conditions after the interventions. The study used a small sample of children with a wide range of ages who suffered from anxiety making it very difficult to generalize the effect to other populations of children. Furthermore, given the objective of the study, the effectiveness of journal writing itself was not examined and a control group was not used. It therefore would be useful to assess the impact of journal writing on anxiety with children.

General hypotheses and order of articles

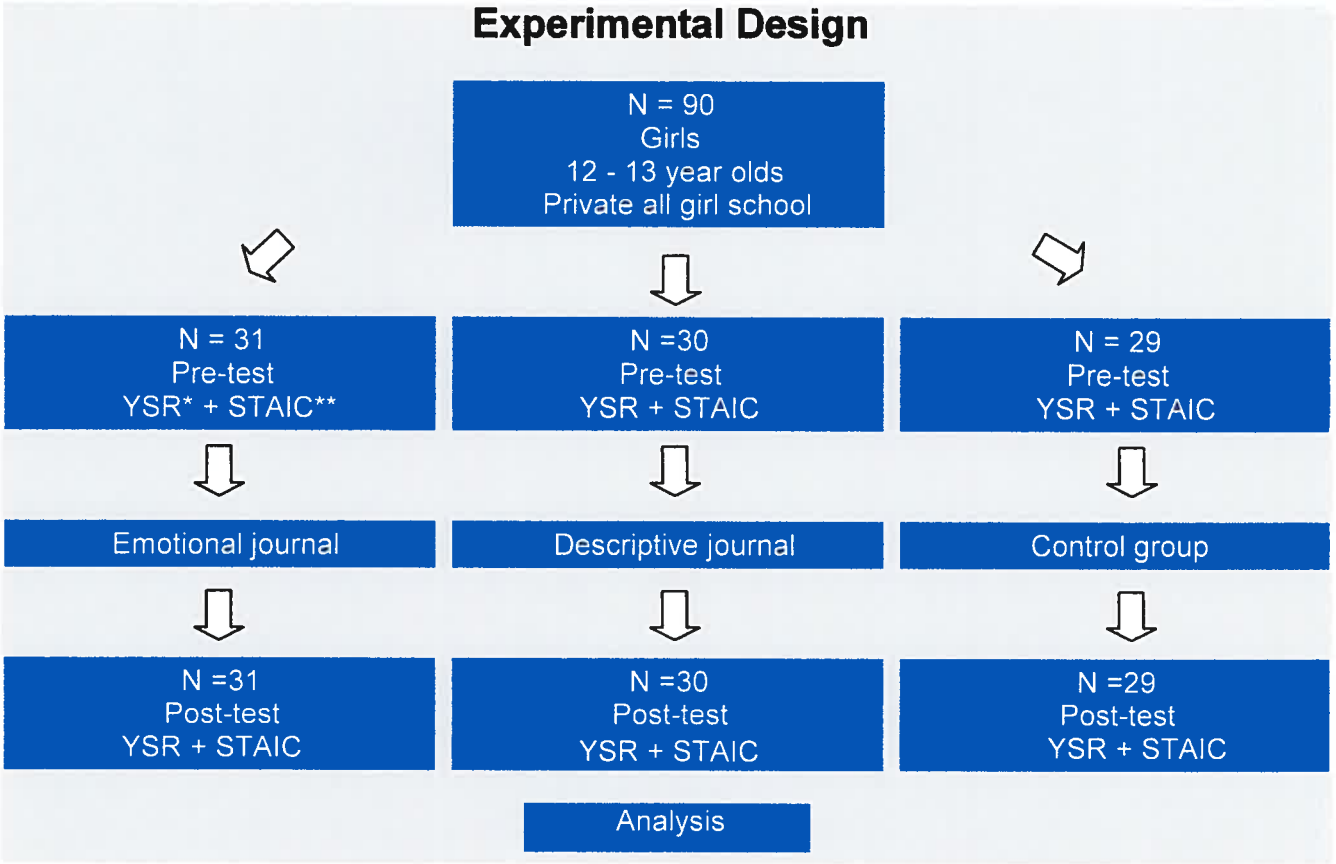
The goal of this thesis is first, to assess whether disclosure in the form of structured journal writing for young adolescent girls might have comparable, beneficial psychological effects similar to interventions for adults. Second, the goal is to examine whether changes in psychological well-being (anxiety, internalizing and externalizing symptoms) differed over time. The first two goals are concerned with determining journal writing's efficacy as a therapeutic tool for young adolescents and are explored specifically for the concepts of State anxiety, Trait anxiety, Internalization and Externalization in the first two articles. Then, the third goal of the thesis will be undertaken within these same articles: In light of the obtained results, explanatory models such as Approach/Avoidance models of coping, Cognitive Behavioural models, and Pennebaker and Susman's (1988) model of Inhibition-Confrontation will be examined as they apply to adjustment in young adolescents. Fourth, because very few studies have used journals as a therapeutic tool, the third article will examine journal content. Suggestions will then be made regarding the encouragement of using certain techniques during therapeutic interventions.

Precisions about the procedure

Although the procedure is detailed in each article, certain details not included will be discussed in this section. This study is based on the Pennebaker and Susman (1988) paradigm that has frequently been used to evaluate the efficacy of journal writing in various populations such as rape victims, cancer patients, college students and prison inmates (e.g., Sheffield, Duncan, Thomson, & Johal (2002)). Studies have found that

talking and writing about emotional experiences are superior to writing about superficial topics. Therefore, typically, studies include an emotional journaling group and a non-emotional group where participants write descriptive accounts rather than writing about emotional topics. In order to control for the effects that descriptive writing may have on participants, a third group was added. Furthermore, since the choice of topic (notably what concerns people the most) tends to determine the impact of journaling rather than writing about specific traumatic experiences, journals were structured so that participants could write about self-chosen positive and negative events in their day-to-day activities. Figure 2 shows a flow chart of the experiment.

Figure 2. Experimental design



* Youth Self-Report (Achenbach, 1991) **_The State-Trait Anxiety Inventory for Children_ (Spielberger, 1973)

Participants

Ninety-seven preadolescent girls aged 12 and 13 (M =12.9, SD = 0.3) were initially selected to participate in the study. They were recruited, from private, Anglophone schools in the Montreal region. All participants were from similar socio-economic levels, their parents working in either Professional or Middle Management as measured by the Socio Economic Index for Occupations in Canada (Blishen et al., 1987). Three of the participants came from single-parent families. Additionally, participants were screened with the STAIC for high levels in anxiety and, had they shown high levels, would have been excluded. The girls were randomly assigned to the Emotional Journal group (n = 31) and to the Descriptive Journal group (n = 30). Girls in a separate classroom (n = 29) from the same school were assigned to a control group. Parental permission to participate was not obtained by two girls who, instead of completing the experimental task, began their homework. One of the journal participants was omitted from the analysis because her teachers initially evaluated her writing skills to be too limited for the task and would have probably been unable to complete the assignment within the allotted time. Four participants failed either to complete the journals or the post-test evaluation. In all, 90 girls participated in the study.
Parents were contacted to inform them of the study and to obtain their accord for the participation of their child in the study. This letter can be found in Appendix A. Also, the parent's and the participant's consent form is found in Appendix B.

Detailed protocols for the first and the last meetings with the participants are found in Appendix C and D. The protocol and instructions for the teachers participating in the experiment is included in Appendix E. In addition to the protocol presented in the

appendices, the participants could, as part of the debriefing, ask questions regarding the study.

Materials

Journals. Appendix F lists the instructions found in the Emotional journals. Appendix G lists the instructions found in the descriptive journal. Appendix H and I include the State Trait Anxiety Inventory for Children (STAIC) (Spielberger, 1973) and the Youth Self-Report (YSR) Achenbach (1991) questionnaires respectively.

Data Analysis

A 3(condition) X 2(pre-test/post-test) MANOVA with repeated measures was performed on the four dependent variables (Internalization, Externalization, State and Trait anxiety) to determine whether there were self-reported changes in adjustment. Table 1 shows the mean and standard deviations for each dependent variable.

Outliers and normality. The participants sampled were presumed to be from a non-clinical population. The minimum and maximum scores for the dependent measures were therefore examined (using a box plot and eliminating scores which would have been considered in above the clinical level for the CBCL) for outliers; however, no data points were removed as none of the scores were judged to be outliers. Given the nature of the measures, floor and/or ceiling effects would contribute to skewing the distribution. Whenever needed, distribution curves were normalised prior to data analysis.

Post Hocs analyses. Post hoc analysis utilised Tukey's Honestly Significant Difference test as it was judged to be the most conservative measure of differences.

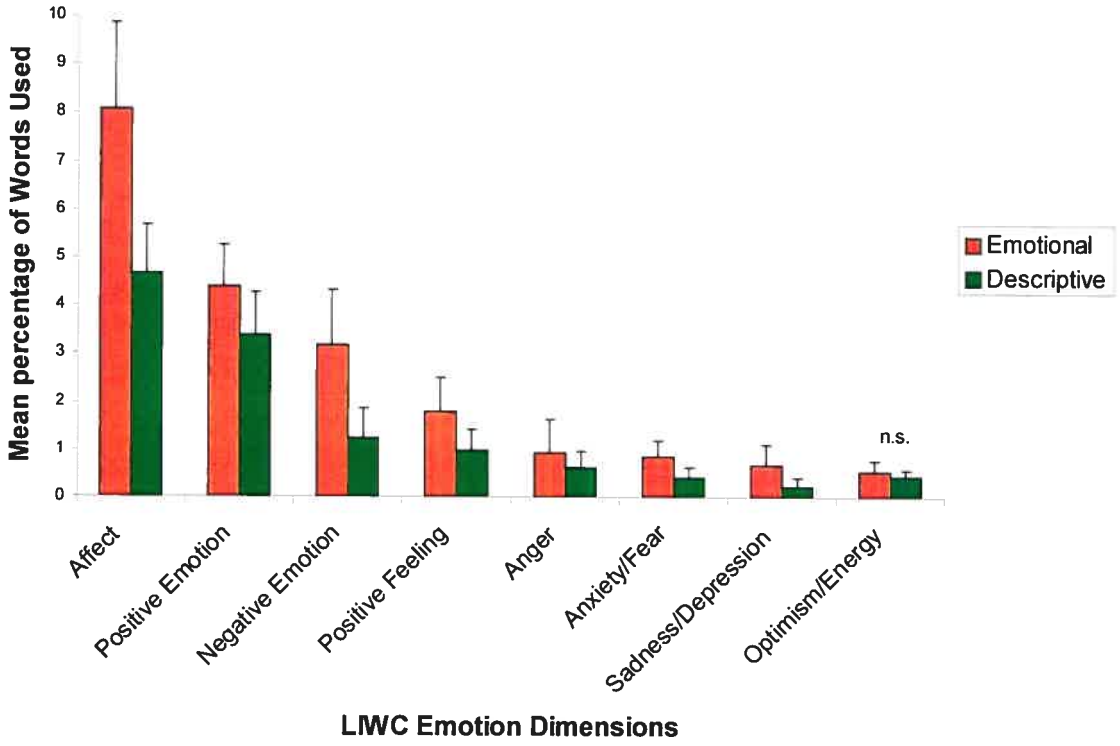
Correlational analyses. Correlational analyses between the frequency of certain words classified by word category and adjustment measures were performed.

Journal content. The Linguistic Inquiry and Word Count (LIWC) calculates the percentage of words of 74 predetermined linguistic categories for a written or a spoken text (See Pennebaker and Francis (1996)) software manual for a detailed description of the procedure used to obtain each word category is described. It must be noted that each word or word-stem is classified in one or more word categories or sub-categories. Appendix J shows the general "Affect" category (which includes all emotional words), the general "Emotion" categories, sub-categories and the corresponding definitions and examples for each of these. In addition, the LIWC categories are arranged hierarchically. For example, All "Anger" words (a sub-category) will be categorized as "Negative emotions" (a category) and by definition, each score will be incremented. This explains the high percentage of words found in the general categories as these are made up of the culminated scores of the sub-categories. Journals were revised to convert words which would not be recognised by the computer program. Misspellings were corrected and contractions were spelled out. Onomatopoeic words were converted according to the context of the journal. For instance, if a participant wrote, "I wasn't allowed to go to the party…aww!" the "aww" was changed to "I am disappointed". If however a participant wrote "We saw some cute kittens…aww!" The "aww" would be converted to "I was touched". Unexpectedly, participants drew pictures. The pictures were systematically and simply described. For instance a picture of a girl crying would

be written as "picture of a girl crying" and a picture of a flower at the end of a sentence would be written as "picture of a flower".

Manipulation check. The Linguistic Inquiry and Word Count program (LIWC) (Pennebaker & Francis, 1996) analyses on a word by word basis the percentage of words that fit into pre-determined dimensions. The LIWC was used in order to determine whether participants assigned to the Emotional journal group actually wrote more emotional words than did the Descriptive journal group and vice versa. Figure 3 demonstrates the successful manipulation of the experimental condition. Only the Optimism/Energy sub-category, (which represented a very small number of the emotional words actually used) was not significantly different in the Emotional and Descriptive journals.

Figure 3. Mean Percentage of Words Used in Journal Conditions



Article 1

The efficacy of self-disclosure through journal writing on State and Trait anxiety in young adolescent girls: Ensuing theoretical implications.

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Abstract

In order to assess the efficacy of journal writing on anxiety and to compare two explanatory models, sixty 12-13 yr-old girls were randomly assigned to complete an emotional or a descriptive journal. Thirty additional girls were placed in a control group. Multivariate analysis of the pre and post measures of State and Trait anxiety were compared. Significant differences between the pre and post measures and between groups were found. Although Pennebaker and Susman's (1988) Inhibition-Confrontation Model was supported in part by the findings, behavioral models such as Mowrer's (1960) two-factor theory could explain some of the reported differences. Journal writing, regardless of condition was judged to be an effective measure for reducing anxiety.

The efficacy of self-disclosure through journal writing on State and Trait anxiety in young adolescent girls: Ensuing theoretical implications.

Journal writing has traditionally been used as a means to access the unconscious (Freud, 1963), for reflective purposes (L'Abate, 1991), as a self-monitoring tool (Beidel, Neal, & Lederer, 1991) and as a therapeutic tool (Penn & Frankfurt, 1994). Only recently has journal writing by adults been scientifically investigated for its therapeutic potential. Esterling, L'Abate, Murray, and Pennebaker, (1999) have found how written self-disclosure, a component of journal writing, is beneficial for adults. The therapeutic utility of journal writing for pre-adolescents and adolescents has yet to be established. The primary purpose of this study is to evaluate the efficacy of journal writing on the reduction of anxiety in young girls. Two explanatory models will be assessed to account for observed changes. These are: The Inhibition-Confrontation model (Pennebaker & Susman, 1988) and the Avoidance/Exposure model (Jones, 1924; Mowrer, 1960; Wolpe, 1958).

The Effects of Self-Disclosure

Self-disclosure is an interpersonal process by which individuals share knowledge about themselves with others. In addition, self-disclosure is an intrapersonal process, allowing for insight and cognitive change (Derlega, Margulis, & Winstead, 1987). Disclosure brings about beneficial effects (Blackburn, 1965; Kilpatrick, Resick, & Veronen, 1981; McClelland, 1979; Pennebaker & Beall, 1986; Pennebaker, Colder, & Sharpe, 1990). The beneficial effects of self-disclosure are evidenced in physical and psychological improvements. For instance, investigators have found that writing about traumatic experiences produces a decrease in physician visits, amelioration of work

performance, and improvements in immune functioning. (Blackburn, 1965; Esterling, Antoni, Fletcher, Margulies, & et al., 1994; Kilpatrick et al., 1981; McClelland, 1979; Pennebaker, Hughes, & O'Heeron, 1987; Pennebaker & O'Heeron, 1984). Other studies have shown both increased hepatitis B antibody levels, and increases in natural killer cell activities following disclosure (Christensen, Edwards, Wiebe, Benotsch, & et al., 1996). Evidence for the psychological benefits of disclosure was also apparent in Pennebaker et al.'s (1990) study. The authors demonstrated that disclosure, in the form of writing, resulted in fewer reports of homesickness, loneliness, and anxiety. Similarly, Greenberg and Stone (1992), Pennebaker et al. (1997) and Petrie, Booth, Pennebaker, Davison, & et al. (1995) have all noted positive short or long-term health benefits and mood improvements after writing about traumatic events for a prescribed period of time. Also, ruminations tended to be alleviated by disclosure (Wegner & Zanakos, 1994). Studies have also suggested that non-disclosure of significant or traumatic events results in detrimental effects (Kilpatrick, Resick, & Veronen, 1981; Pennebaker & Beall, 1986; Pennebaker et al., 1990).

Findings indicate that therapy outcomes are related to changes in clients' stories denoting the involvement of cognitive and emotional processes (Stiles, 1995). Recently, the benefits of narrative therapy, based on verbal as well as written disclosure of personal events in a story format, have resulted in positive effects. Schein (2002) noted that self-disclosure in the form of a narrative allows a person to gain more relevance and meaning in his life. Goncalves and Machado (1999) have summarized research relating to narrative processes. Although the benefits of disclosure have been noted, individual explanatory theories account for only part of the observed changes. Two such theories,

namely The Inhibition-Confrontation model and the Avoidance/Exposure model could each explain some but not all of the observed benefits.

The Inhibition-Confrontation Model

Pennebaker and O'Heeron (1984) proposed that inhibition (not disclosing events) and subsequent disclosure could account for the observed changes. For instance, they found that individuals who experienced trauma and did not disclose them were more prone to illness than individuals who engaged in disclosure. Pennebaker and Susman (1988) have proposed an explanatory model that suggests that the disclosure of significant events in an individual's life promotes the assimilation and integration of this event. The Inhibition-Confrontation model consists of several premises addressing both inhibition and confrontation; two opposing internal processes. The theory states that when a traumatic event is inhibited, the following sequence occurs: a) inhibition causes increased amounts of work, b) increased work causes stress, and c) stress is detrimental to physical health and psychological adjustment. Individuals must be able to assimilate complex events, some of which may be traumatic, so as to make sense of the world. In order to accomplish assimilation, thoughts and feelings must be translated into language. The Inhibition-Confrontation theory states that in order to facilitate adjustment and the assimilation of an experience, individuals must confront the significant event that is causing the distress.

The effect of an individual's self-disclosure on anxiety levels has not been extensively studied (Kloss & Lisman, 2002), especially with regards to children and young adolescents (Muris, Meesters, & Gobel, 2002). If self-disclosure is efficacious for decreasing anxiety, the Inhibition-Confrontation model should also explain changes in

anxiety levels. According to the model, the non-disclosure of anxiety should lead to increased amounts of stress. Conversely, the confronting of anxiety through the disclosure of thoughts and feelings should lead to greater adjustment, therefore a lessening of anxiety and stress.

Support for the Inhibition-Confrontation theory was demonstrated in several studies (Pennebaker & Beall, 1986; Pennebaker et al., 1990; Pennebaker & Susman, 1988). In one study, Pennebaker and Beall (1986) instructed 46 male and female undergraduate students to write for twenty minutes on four consecutive days about either a) a trivial topic, b) a factual rendition of the event, c) their feelings related to this event, or d) their feelings and the facts related to the event. The frequency of visits to the health centre was taken for each participant. It was found that the those who wrote about their feelings and the facts regarding the event (group d) and those who wrote only about their feelings (group c) visited the health centre less frequently than those who wrote about only the facts (group b), and those who wrote about trivial topics (group a). They concluded that written disclosure of traumatic experiences significantly reduced illness. Furthermore, the study showed the importance of disclosing emotions and feelings in order to obtain benefits from the disclosure. Although the Inhibition-Confrontation model explains changes in health and psychological measures, the question of whether this model applies to other concepts such as anxiety, must be asked because alternative explanations may account for the observed differences.

In later studies, the notion of cognitive change through written disclosure, implicit in the theory, was examined by performing an analysis of the content of journals written by university students. It was found that there was a positive correlation between the

number of cognitive words (e.g., know, cause) and insight words (e.g., think, consider) used and the degree of adjustment reported in individuals (Pennebaker, Mayne, & Francis, 1997). Specifically, subjects who had written more cognitive words in their texts reported coping better with feelings of bereavement compared to participants who used fewer cognitive words in their writing. Other studies have revealed a cognitive component to disclosure. For instance, Berkowitz and Troccoli (1990) showed that using language to convey emotions alters inchoate feelings and may reduce the perceived intensity of these feelings. Specifically, they suggested that this occurs when individuals become more aware of their unpleasant emotions, they engage in a higher level of cognitive processing which then allows them to gain a different perspective.

Confrontation by translating events and related emotions into language involves an individual's attempt to understand and organize an upsetting or novel experience. Accordingly, strategies for confronting, such as translating events into language, must be developed in order to cope with a significant event. Two ways to translate such events are to verbalise or to write them. Pennebaker and Beall (1986) suggest that talking or writing about difficulties could prevent certain health and psychological problems. That is, the act of disclosure allows one's feelings and thoughts to become more concrete, thus enabling understanding of the disclosed event. It is important to note that according to the model, simply describing a stressful situation does not consist of confrontation. Specifically, past research has indicated that in order to obtain beneficial effects from verbal or written disclosure, one must write about the thoughts and feelings related to the event, rather than describing the event itself. For instance, a study by Pennebaker, and Beall (1986) demonstrated that a group of 46 university-level

participants who only described a traumatic situation, rather than both describing it and relating the thoughts and feelings associated with the event, showed no significant amelioration in health and psychological measures and grades; however, those who wrote about their thoughts and feelings showed an increase in all of these measures. Therefore, the concept of confrontation within this model requires more than a description of the event.

Avoidance/Exposure

Although the Inhibition-Confrontation model accounts for psychological changes observed such as decreased anxiety, it has been suggested that disclosure may account for a different process through exposure (Bootzin, 1997; Kloss and Lisman, 2002; Lepore, Greenberg, Bruno, & Smyth 2002). Specifically, the process of disclosure, which implies a retelling of events, is a form of exposure to anxiety-causing stimuli. In fact, it has been shown that the avoidance of anxiety-provoking stimuli may lead to a temporary relief from anxiety but over time, to greater anxiety and a generalization of anxiety (Kazdin, 1989). Similarly, Mowrer's (1960) two-factor theory of avoidance describes how becoming frightened by an intense emotional response can lead to avoidance of this situation in the future. Conversely, being exposed to a situation without the associated negative consequences allows for an emotional correction, hence a decrease in anxiety. Therefore inhibition of an anxiety-provoking situation could be considered avoidance and one would therefore expect an increase in anxiety (Bootzin, 1997). Also, exposure to anxiety-provoking situations has been shown, in the long term, to decrease anxiety (Albano & Morris, 1998).

Exposure involves subjecting an individual to anxiety-producing stimuli while

allowing the feelings of anxiety to gradually dissipate. These stimuli can be generated through a variety of modalities including imaginal (subject generates stimulus via imagination) and in vivo (subject is exposed to real situations) (Eisen & Kearney, 1995). The efficacy of exposure has been well established. For instance Foa, Rothbaum, Riggs, and Murdoch (1991) demonstrated that among women with rape-related PTSD, those subjects who received exposure-based treatment showed continued improvement following post-treatment assessments. These subjects' psychological condition was superior to that of the subjects receiving stress inoculation treatment (thought stopping, guided self-dialogue, breathing retraining, education and role playing) at a three-month follow-up. This consisted of focusing on altering the self-statements that an individual routinely makes in stress producing situations with the goal of restructuring the statements, so as to improve functioning under stressful conditions. Similarly, Brom, Kleber, and Defares (1989) demonstrated that systematic desensitization was as effective as other approaches in the treatment of PTSD. Exposure therapy has also been shown to be effective for other anxiety based problems, as well as eating disorders and anger management (Boutelle, 1998; Brondolo, 2000; Reitman, 1997).

Similar to imaginal exposure, journal writing, which involves confronting the anxiety-producing situation, would involve exposure because the writing of a journal consists of evoking the experience. For instance, it has been found in the prevention of PTSD that debriefing through repeatedly retelling the traumatic event leads to desensitization (Zeev, Iancu, & Bodner, 2001). Simply describing a situation *without* disclosing the accompanying emotions would also involve exposure. Journal writing however, differs from exposure situations in that the participants are not required to

write about the same topic at each session. Considering that the mechanisms proposed by these models may explain all or only part of the changes found when individuals write journals, it is important to determine which model best explains and predicts changes. Alternatively, elements of these models may interact together, each playing a role in the reduction of anxiety.

Studies examining the effects of self-disclosure through writing have noted a reduction in anxiety through self-report measures. For example, a case study using both anxiety ratings and behavioural observations found very significant decreases in anxiety after writing an average of 150 minutes each week for six months (Barrett & Wolfer, 2001). Brown and Heimberg (2001) evaluated 85 undergraduate women who acknowledged attempted or completed rape wrote about their experience and read their narratives. Symptoms of dysphoria, social anxiety, and posttraumatic stress disorder were assessed pre and post intervention. The authors found that the subjects disclosing greater detail and personalization in the description also reported decreased symptoms of dysphoria and social anxiety. However, the nature of the writing task did not predict degree of symptom reduction indicating that systematic desensitization could also account for the results.

Additionally, several therapies for anxiety have successfully used journal writing as an adjunct. To date, studies have assessed the effect of journal writing on adults but very few studies have been done on children or adolescents. For instance, Muris, Meesters, and Gobel, (2002) examined the cognitive component of cognitive behaviour therapy with 8-12 yr olds with anxiety problems. Participants were assigned to either a Cognitive Coping intervention, which focused primarily on the cognitive component

(e.g., identifying negative cognitions and developing a plan to cope with the situation) or an Emotional Disclosure intervention in which children were invited to write about their fears and anxious experiences. Children completed self-report questionnaires of anxiety disorders symptoms. Results showed that levels of anxiety decreased substantially for both conditions after the interventions. However, given the objective of the study, the effectiveness of journal writing itself was not examined and a control group was not used. It therefore would be useful to examine the impact of journal writing on anxiety with young adolescents.

State and Trait Anxiety

State and Trait anxiety were first identified through factor analyses (Cattell & Scheir, 1958). State anxiety is defined as "subjective and consciously perceived feelings of tension, apprehension, nervousness and worry accompanied by or associated with activation and arousal of the autonomic nervous system". State anxiety may vary in intensity and over time as a function of the environment influencing the individual. Trait anxiety is defined as "individual differences in the tendency to see the world as dangerous and threatening and in the frequency that State anxiety is experienced over long periods" (Spielberger, 1973). In fact, studies have shown that individuals with high Trait anxiety will react more significantly to situations involving relationships with others than those with low Trait anxiety. Since then, many studies have shown the discriminant validity of these two concepts.

Children and young adolescents

Although children are often encouraged by their teachers or parents to keep journals, the therapeutic effects of journal writing have not been assessed for this

population. Specifically, journals written by children have been used as an assessment tool in order to measure levels of anxiety and motivation rather than being used to help increase adjustment. Journals have been utilized to study motivation through an experience sampling method. This involved evaluating the level of motivation reported by children in their journals at predetermined times (Lavallee & Campbell, 1995). These findings indicate that children and young adolescents could write journals for a prescribed period of time, as do adults in experiments. This suggests that journals for children and young adolescents could act as a therapeutic modality to reduce anxiety.

The Present Study

According to the American Psychiatric Association (1994), anxiety disorders, which include separation anxiety, generalized anxiety, social phobia, and specific phobias, are among the most prevalent psychiatric problems in children. While this study does not specifically examine the anxiety disorders mentioned previously, their prevalence makes it pertinent to examine anxiety in a general population, given that anxiety has been shown to be chronic in nature and can worsen over time (Keller, Lavori, Wunder, Beardslee, & et al., 1992). Also, anxiety can interfere both with school based and social activities (Dweck & Wortman, 1982).

According to a review of studies conducted by Fields and Prinz (1997), there is growing evidence that coping abilities in children (whether preschool, primary school or adolescent aged children), due to their limited repertoire in cognitive, affective, expressive factors and experience, may differ markedly from those of adults. For example a child facing a first misunderstanding with his/her best friend may have more difficulty in coping not having yet had the experience of reconciliation. The authors note

that as age increases there is a shift from escape strategies (behavioural avoidance) to cognitive avoidance. They note an overall shift to more situation and stressor specific strategies. Furthermore, Ollendick and Hirshfeld-Becker, (2002) in a review of studies examining the tenets of developmental psychology, found that twelve-year-olds often report anxious cognitions and that when faced with anxiety-provoking situations, that they are unable to think clearly. They also point to developmental differences between children, adolescents, and adults suggesting that unlike older adolescents and adults, children and young adolescents may not be able to recognise their fears as being irrational. Therefore, although the efficacy of journal writing by adults has been examined, developmental reasons make it important to assess the journal writing by young adolescents who may not yet be able to benefit from this technique. Lastly, the importance of assessing an intervention that can allow a young adolescent to develop a useful coping skill must not be overlooked.

For the purpose of this study, girls in their first year of high school were sampled because the transitional period from a familiar elementary school to an unfamiliar high school is stressful; they must adjust to new friends, teachers, responsibilities and challenges. Participants were limited to girls, as girls and boys mature at different rates, therefore, the transition between primary and secondary school for boys may not be the equivalent of the transition period for girls (De Bellis et al., 2001; Lynn, Backhoff, & Contreras-Nino, 2004). Additionally, according to Croake, and Knox (1973) girls tend to report anxiety more commonly than do boys (whether or not this is due to a reporting bias). The authors arrived at this conclusion after having conducted a large (n = 968) study of 3rd and 6th-grade children who had responded to a questionnaire of children's

fears and the intensity of these fears. Furthermore, one variable examined by Blalock and Joiner (2000) consisted of the relationship between moderating effects of gender and cognitive avoidance-coping on the "negative life events-depressive/anxious" symptoms. Male and female college students (n = 179) completed the Coping Responses Inventory (CRI), Negative Life Events Questionnaire and Beck Depression and Anxiety Inventories during pre and post measures. The authors suggest that cognitive avoidance (inhibition) is more highly related to depression and anxiety in women. Thus, when the reporting of anxiety is critical to evaluate the efficacy of journal writing, and when the relevance of the Inhibition-Confrontation model is being assessed, girls were judged to be an ideal population.

The present study proposes to investigate the efficacy of journal writing on State and Trait anxiety for children, specifically twelve and thirteen-year-old girls. Furthermore, it will explore the Inhibition-Confrontation model, which includes the notion of cognitive change, and the Avoidance/ Exposure model. This will be accomplished by noting self-reported anxiety levels throughout the various experimental conditions before and after the experiment. Correlations between the level of anxiety and the different words used will also be examined for evidence of support for the explanatory models. It is expected that girls who write emotional journals will display decreases in anxiety from pre-test to post-test, as shown by changes in children's self-reports, using the STAIC (Spielberger, 1973). Both proposed explanatory models would predict these changes; however it would be expected that if the Inhibition-Confrontation model were supported, girls writing emotional journals should evidence greater reductions in anxiety when compared to the girls who write descriptive journals.

Similarly, if exposure would explain the amelioration, it would be expected that girls in both the descriptive and the emotional journal writing conditions would evidence decreases in State and Trait anxiety as both conditions would require an imaginal procedure of the anxiety-provoking situation. Evidence for cognitive change included in the Inhibition-Confrontation model should be apparent by a correlation between the number of cognitive words and the degree of reduction in anxiety across all conditions. Additionally, if the emotional journal writing condition were to show a decrease in anxiety, the notion of cognitive change presented in the Inhibition-Confrontation model would predict that a greater amount of cognitive words would also be present in this condition.

Method

Participants

Ninety-seven preadolescent girls aged 12 and 13 (M =12.9, SD = 0.3) were initially selected to participate in the study. They were recruited from private, Anglophone schools in the Montreal region. All participants were from similar socio-economic levels, their parents working in either Professional or Middle Management as measured by the Socio Economic Index for Occupations in Canada (Blishen, 1987). Three of the participants came from single-parent families. Additionally, participants were screened with the STAIC for high levels in anxiety and, had they shown high levels, would have been excluded. The girls were randomly assigned to the Emotional Journal group (n = 31) and to the Descriptive Journal group (n = 30). Twenty-nine girls in a separate classroom from the same school were assigned to a control group. During recruitment, parental permission to participate was not obtained by two girls who,

instead of completing the experimental task, began their homework. One of the journal participants was omitted from the analysis because her teachers initially evaluated her writing skills to be too limited for the task and would have probably been unable to complete the assignment within the allotted time. Four participants failed either to complete the journals or the post-test evaluation. In all, 90 girls participated in the study.

Materials

Journals. Journals have not been used previously with children and adolescents as a therapeutic tool; therefore there were no available journal models in the literature. As a result the experimenter designed the journals used in the study. A "duo-tang" folder was provided to each participant and included general instructions (e.g., Read the questions carefully and you may write as much as you want, etc…). One question was asked for each journal entry giving participants indications as to what they should write. These instructions varied depending on the condition (see Appendix F and G). In a review of the literature, Fields and Prinz (1997) found that stressors often noted as salient from a child's perspective included social, academic, and self-identified stressors. Journal instructions therefore encouraged the participants to discuss these concerns. For example, they were asked about their thoughts and feelings regarding high school, thus encouraging them to write about academic challenges. Similarly, asking them about their thoughts and feelings with respect to making friends encouraged them to discuss social concerns. Asking girls to identify what put them in a good mood or a bad mood during the week encouraged them to discuss self-identified stressors. The girls in the Emotional Journal condition were asked to write about their emotions as well as their thoughts and their feelings related to Fields and Prinz's (1997) identified themes (see

Appendix F). Each of the three themes was addressed during the week. Similarly, the girls in the Descriptive Journal condition were asked to list and describe events pertaining to social, academic and self-identified situations (see Appendix G). A page was provided for each of the twelve entries with additional room on the back of each page. Teachers asked students to write in their journals three times a week for one month. In order to maintain confidentiality, after the journals were collected, names were removed and replaced with a subject number allowing the researcher to pair the journals with the adjustment measures.

The State-Trait Anxiety Inventory for Children (STAIC). The STAIC (Spielberger, 1973) was used as an adjustment measure. The STAIC is a self-report measure that consists of two scales. The State anxiety scale is designed to measure transitory anxiety while the Trait anxiety scale was designed to measure relatively stable differences in anxiety. Each scale consists of 20 items that children use to indicate how they generally feel. That is, they must choose one of three statements (e.g., hardly ever, sometimes, or often) that describes how they generally feel. Items are scored on a range from one to three with higher scores reflecting greater anxiety. Therefore, greater adjustment would be demonstrated in decreases in either or both the State and the Trait anxiety scales. Although the STAIC was originally designed to measure State and Trait anxiety in children ranging in age from nine through twelve years old, this questionnaire has successfully been used and validated for respondents up to the ages of 18 (Cross & Huberty, 1993). According to Spielberger (1973) the STAIC has a good internal consistency (α = 0.81 for girls and 0.78 for boys).

It also has moderate test-retest reliability for one week ranging from 0.47 for the State scale to 0.71 for the Trait scale for girls.

The validity for the STAIC has been well documented. For example, a study by Reynolds (1980) found high correlations between the Trait scale and the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1997) and low correlations with the State scale indicating the distinction between the State and Trait scales. Furthermore, a study by Dorr (1981) performed a factor analysis on the STAIC on the scores of a large population of fourth, fifth and sixth graders and found that it yielded a three factor solution of Trait anxiety, State anxiety present and State anxiety absent, thus supporting the questionnaire's validity.

Procedure

Experiment

Those who agreed to participate were randomly assigned to one of two conditions: The Emotional Journal writing condition asked participants to write about their emotions, their thoughts and their feelings (e.g., the events that put them in a good mood during the week), and the Descriptive Journal writing condition asked for a non-emotional description of the events of the day (e.g., to list and describe what they did after school that week). Each participant was seen in a quiet area in the school where they received individual instructions at the time of testing regarding how to use the journals and the written instructions were reviewed (Appendix C). Furthermore, they were informed that whatever they wrote in their journals, and whatever they answered in the questionnaires would remain confidential and that they could withdraw at any time. The pre-tests, including the STAIC, were administered. During the next four weeks, all

90 girls completed their journals during the class time, 20 minutes per sessions. Each participant was individually administered the post-test measure at the end of four weeks when all of the twelve journal entries had been completed. Any questions and comments were addressed at this time.

Results

Manipulation Check

To ensure that the participants in the Emotional Journal condition wrote more emotional words than did the participants in the Descriptive Journal condition, *t*-tests comparing the mean percentages of emotional words for given emotional dimensions found in both journal conditions were performed using the Linguistic Inquiry and Word Count (LIWC).

LIWC. The Linguistic Inquiry and Word Count (LIWC) calculates the percentage of words of 74 predetermined linguistic categories for a written or a spoken text (Pennebaker & Seagal, 1999). Independent judges' ratings of texts have been found to be highly correlated with LIWC scales based on the same texts. For instance, in the affective process word category correlations between the judges ratings and the LIWC ranged from $r = 0.57$ to $r = 0.75$, thus supporting the LIWC's validity. The content of the journals in the present study, therefore, were categorized and variables consisted of the percentage of cognitive words and emotional words. Appendix J shows the general affect category (which includes all emotional words), general emotion categories, sub-categories and the corresponding definitions and examples for each of these.

Table 1 shows the mean percentage of words, standard deviation, *t*-test and level of significance for each variable in each journal condition. Significant

differences between the mean percentage of words in the Emotional Journal condition and the Descriptive Journal condition were found for the general Affect category indicating that overall, more affective words were used in the Emotional Journal condition when compared to the Descriptive Journal condition. Furthermore, the Positive Emotions and Positive Feeling categories and the corresponding sub-categories of Anxiety/Fear, Negative Emotions, Anger, and Sadness/Depression were examined. Emotional Journal participants wrote significantly more emotional words than did their counterparts in the Descriptive Journal condition. Only the Optimism/Energy dimension failed to show a significant difference with the Emotional Journal participants, writing slightly but not significantly more than the Descriptive Journal participants. The absence of differences of this last frequency between groups could be accounted for given the low frequency of usage of such words in the journal.

STAIC

A 3(condition) X 2(pre-test/post-test) MANOVA with repeated measures on the dependent variables (State and Trait anxiety) was performed to determine whether there were self-reported changes in anxiety levels for each group. Both experimental groups and the control group showed a significant difference in State and Trait anxiety scores from pre to post-test (within subjects) measures, demonstrated by a main effect for the pre and post conditions, $F(2) = 8.09, p < .05$. There was a significant interaction between the conditions and the pre and post-tests $F(4) = 5.49, p < .05$. Figure 1 and Figure 2, showing the pre and post mean differences for State and Trait anxiety respectively, illustrate the relationship revealed between the groups.

State Anxiety. Post hoc analysis using Tukey's HSD revealed no significant differences between the three conditions for the pre-test, indicating that the groups had on average, equal anxiety levels before the journal writing began. However, post-test comparisons revealed that both the Emotional and the Descriptive Journal conditions were significantly different from the Control condition ($p < .05$). Specifically, the participants who wrote emotional and descriptive journals both showed a decrease in State anxiety compared to those who did not write anything (See Figure 1).

Trait Anxiety. Post hoc analysis using Tukey's HSD revealed no significant differences between all three groups before journal writing. Although at post-test, Emotional Journal condition scores were significantly different from the Control condition scores ($p < .05$), these last were not significantly different from the Descriptive condition scores. Similarly, the Descriptive condition was not significantly different from the Control condition (see Figure 2).

Specifically, the participants who wrote emotional journals showed a significant decrease in Trait anxiety whereas the control group showed a significant increase. Those who wrote Emotional journals did not differ significantly in anxiety levels from those who wrote Descriptive journals at post-test. Those who wrote descriptive journals, however, did not differ from the control condition. This trend indicates that Trait anxiety tended to be lower for those who wrote journals, whether emotional or descriptive, thus accounting for the interaction effect initially reported.

Word Frequency. In order to assess the relation between the number of cognitive words written in journals and the level of State and Trait anxiety, correlations were performed using the LIWC. Table 2 shows the correlation between the cognitive word

categories and the pre and post differences of State and Trait anxiety. Difference scores were calculated by subtracting the post scores on the STAIC from the corresponding matched pre scores. A significant correlation between the frequency of the use of the first person singular and the difference scores for both State ($r = .45$, $p < .05$) and Trait ($r = 0.44$, $p < .05$) anxiety was found across experimental groups. That is, those who demonstrated the most reduction in their anxiety scores in the Emotional journal group used the word "I" more often than those who evidenced less change in their anxiety scores.

Additionally a significant correlation between the number of insight words and the difference scores on pre and post test of both State and Trait anxiety was found ($r = .66$, and $r = .44$ respectively) indicating that girls whose journals contained more insight words displayed the most reduction in both State and Trait anxiety compared to those who used fewer insight words. No correlation was found between the degree of anxiety and the frequency use of other cognitive words (see Table 2). Furthermore, a correlation was performed between self-reports of Trait anxiety and the number of insight words regardless of groups. A negative correlation ($r = -0.56$) was found indicating that the fewer insight words were present in the text, the greater was the anxiety reported.

Discussion

Initially, the Emotional journal group, Descriptive journal group and the Control group showed no significant differences in State and Trait anxiety levels indicating that all three groups were equivalent and reported the same levels of anxiety before the study. After the two experimental groups wrote journals, they both evidenced significant decreases in both State and Trait anxiety from pre to post-test. That is, girls who wrote

either a descriptive account of their activities, or girls who wrote about their thoughts and feelings regarding their activities reported less anxiety than did the group who did not write a journal.

These findings are consistent with the exposure hypothesis which would predict that exposure, through either describing stressful stimuli or describing the thoughts and feelings accompanying the stimuli, would lead to a decrease in anxiety for the groups that wrote both the Descriptive and Emotional journals, much like systematic desensitization. Mowrer's (1960) two-factor theory of avoidance describes how becoming frightened by an intense emotional response can lead one to avoid it further. Being exposed to a situation without the associated negative consequences can allow for an emotional correction, hence a decrease in anxiety. This may explain the role of exposure during journal writing where inhibition would parallel avoidance and confrontation would be a means of exposure, thus explaining why simply describing the stimulus with no negative consequences would decrease anxiety as much as writing about one's emotions when facing the same stimulus.

The Inhibition component of the theory, that is, not writing about a stressful event was supported by the increase in self-reported anxiety for both State and Trait anxiety in the Control group. Inhibition resulted in poorer adjustment as predicted by the Inhibition-Confrontation theory. For State anxiety no differences were revealed between the inhibition of emotions (Descriptive journal group) and emotional expression (Emotional journal group). The immediate impact of exposure, which would be measured by the State anxiety, could explain the similar results between the journal groups. However, for Trait anxiety, the inhibition of both the situation and the emotional

content (Control group) yielded an increase in anxiety. Inhibition of just emotional content (Descriptive group), yielded a trend toward the decrease of anxiety, and no inhibition (Emotional group) yielded a significant decrease in anxiety.

While both the Emotional journal group and the Descriptive journal group showed a reduction in anxiety after journal writing, the Control group who did not write journals, showed a significant increase in anxiety. In this case, self-reported anxiety increased over time. The inhibition component of the Inhibition-Confrontation theory is partially supported by these results. According to the theory, inhibition would result in an increase in stress, which would be detrimental to psychological health, indicated, in this case, by an increase in STAIC scores for the girls who did not write journals. However, the results do not indicate whether this increase in anxiety is a result of inhibition or whether a different process could account for the increase in anxiety. For instance, Mowrer's (1960) two factor theory of avoidance would predict that avoidance of an anxiety provoking stimuli would result in an initial decrease in State anxiety, however, over time, there can be an increase in anxiety through the generalization of the anxiety-provoking stimulus. In this case, girls who initially found their school environment, their relations with their peers or other self-identified concerns anxiety-provoking, reported a greater amount of anxiety on the STAIC in the control group, thus providing an alternative explanation for the results.

Contrary to the Inhibition-Confrontation theory which predicts that only the Emotional journals would show a decrease in self-reported anxiety, there was no difference in the reported level of anxiety between the group of girls who wrote Emotional journals and the group that wrote the Descriptive journals. That is, the theory

would predict that if confrontation were to occur in the form of emotionally describing a stressful situation, then the group of girls who wrote the Emotional journals should have reported a decrease in their levels of anxiety as measured by the STAIC, while those who wrote Descriptive journals should not have reported this decrease when in fact both groups evidenced decreases. The Inhibition-Confrontation model also contains within it an implicit cognitive component. It would be expected that there would be a negative correlation between cognitive words and the level of anxiety in groups. The girls who demonstrated the most reduction in anxiety, irrespective of the groups, more frequently used insight words.

Although the LIWC has six categories of cognitive words, namely, causation, discrepancy, inhibition, tentativeness, certainty and insight, only insight words showed a significant correlation with the reduction of anxiety. Past research has suggested that journals may allow for increased insight (Pennebaker & Francis, 1996; Pennebaker & Seagal, 1999). Insight is the capacity for understanding an event or action, or one's own or another's mental processes. Lewis and Bucher (1992) also report that emotional expression in itself is not sufficient to achieve significant changes in self-reports; that journals may increase insight into situations that would eventually result in cognitive restructuring. Cognitive restructuring is a technique of cognitive therapy that enables one to identify negative, irrational beliefs that can be responsible for psychological difficulties and replace them with truthful, rational statements (Beck, 1963). This process is also called reappraisal, relabeling, reframing, and attitude adjustment. In order to achieve this goal, one must be able to understand and recognize these beliefs in order to replace them. These results support the notion that Journal writing may be the

aforementioned step that allows one to identify the beliefs first by verbalising the thoughts, then by ordering them. This is similar to what was suggested by Piaget (1967), "...that language confines itself to profoundly transforming thought by helping it to attain its forms of equilibrium by means of a more advanced schematization and a more mobile abstraction." (p. 91). Additionally, a significant negative correlation was found between insight and Trait anxiety when considering both groups overall. That is, the fewer insight words used, the higher the reported anxiety, thus further supporting the role of insight.

The absence of correlations between the other categories of cognitive words such as causation, discrepancy, inhibition, and tentativeness emphasize the importance of distinguishing between cognitive mechanisms. These results could be explained by the presence of insight. Insight is an adaptive function that may eliminate the need to rely on other cognitive functions, which may act as defence mechanisms. For example, words relating to causation, one of the cognitive categories, may be a form of rationalisation. The nature of journal writing would also be paradoxical with respect to the use of inhibition as a defence mechanism. Specifically, while writing a journal, the process of disclosure reduces the likelihood that inhibition would be used as a defence. Similarly, using tentativeness or uncertainty, another of the cognitive categories, would be difficult while writing a journal because as previously mentioned, the act of writing, even unclear information, will lead to the clarification of information, this again leading to insight.

A significant negative correlation between the frequency of the use of the word "I" and the level of self-reported Trait anxiety was found for girls who wrote Emotional journals but not for girls who wrote Descriptive journals. The differences between the

use of the first person singular and the level of Trait anxiety only for the group who wrote Emotional journals suggests that exposure may explain the decrease in State anxiety (a more immediate measure) while the trend for Trait anxiety (requiring a greater degree of change over time) may be accounted for by both exposure and another "mechanism". This mechanism may be a cognitive component present when girls write about their emotions, but not when they simply describe a situation. In fact, insight words were more numerous in the emotional group compared to the descriptive group, thus supporting this interpretation.

Although previous research with adults has not reported a correlation between the first person singular and adjustment, developmental issues may explain this. For instance, a study by Beidel and Turner (1998) found that young adolescents often report anxious cognitions and some of these adolescents reported being flooded by so many thoughts that they could not think clearly. Furthermore Lahey and Strauss (1982) reported that older children, adolescents and adults report being able to recognize irrational fears while younger children cannot. This difference between children, adolescents and adults in the processing of cognitions may explain why no previous correlations between the use of the first person singular and adults were found. Perhaps the use of the first person singular is an intermediary step used by children and young adolescents to organize their thoughts and identify erroneous cognitions and then declines as adulthood approaches, much like the egocentric speech found in childhood described by Vygotsky (1962) as an intermediary to inner speech, that declines as inner speech appears. Similarly, Erikson (1968), when discussing the role of the first person singular stated that, "...to ignore the conscious "I" in its relation to its existence means to

delete the core of human self-awareness, the capacity, which, after all, makes self-analysis possible" (p 219). According to Elkind (1967) along with the onset of operational thought, children at the age of 11 or 12 years demonstrate adolescent egocentrism which consists of them believing that their preoccupations and thoughts reflect what others may also be thinking; that others are also preoccupied by them. Similarly, according to Erikson (1968), during the developmental stage implicating identity cohesion or role confusion, adolescents may experience anxiety related to identifying their personal beliefs.

> They are sometimes morbidly, often curiously preoccupied with what they appear to be in the eyes of others as compared to what they feel they are and with the question of how to connect the roles and skills cultivated earlier with the ideal prototypes of the day. (p. 128).

The use of the first person singular in this case may be an indication of the efforts made at establishing an identity. Specifically, as young adolescents try to confront their cognitions rather than inhibit them, they would try to explain others' behaviours as thoughts similar to their own, thus the increased use of the word "I" not otherwise noted for adults. Results therefore indicate that writing a description of events and writing about emotions differ both in the degree of insight produced and in the ability to use the first person singular in order to better organize thoughts.

According to Spielberger's (1973) conception of State and Trait anxiety, it would be expected that a significant reduction in State but not in Trait anxiety would occur initially because State anxiety is a reflection of anxiety at the time the questionnaire is filled out, whereas Trait anxiety reflects a more enduring state. This was supported by

the finding that journal writing, regardless of the journal condition, appeared to significantly reduce State Anxiety, thus implying that regardless of whether girls wrote an emotional or a descriptive account of a situation, State anxiety could be reduced. That is, there appeared to be a significant immediate situational benefit from writing a journal. As would be predicted by the concept of Trait anxiety, the participants who wrote an Emotional journal reported greater changes in Trait anxiety than did the control group although those who wrote in a Descriptive journal evidenced no significant changes. Although an overall main effect for the condition was not found, the trend indicates that Trait anxiety tended to be lower for those who wrote emotional journals, thus accounting for the interaction effect initially reported. Again, the results can be explained by the fact that Exposure tends to have a more immediate impact and could be measured by State measures of anxiety. Conversely, Cognitive Restructuring would take longer to have an effect and could be measured by Trait anxiety.

This progression suggests that those who wrote Emotional journals benefited more from writing than did those who wrote Descriptive journals, who benefited more than the control group. However, for a more enduring decrease in self-reported anxiety (Trait anxiety), girls had to write about their thoughts and feelings rather than simply describe the situation. This finding supports the notion that in order for individuals to confront inhibited thoughts and for them to benefit from journal writing, they must write about their emotions rather than using only descriptive phrases (Pennebaker, 1997).

For State anxiety, both descriptive and emotional journals show a lowering of scores whereas the inhibition part of the Inhibition-Confrontation theory is supported. However, when Trait anxiety was measured, the evidence of inhibition is still there but

there seems to be a trend indicating that the more confrontation is present through cognitive change, the more anxiety is reduced. Therefore the Emotional journal group was significantly less anxious than the control group. How can the discrepancies be explained? Exposure could account for the changes in State anxiety, however, for more enduring Trait anxiety changes, both exposure and changes in cognition would take place, thus explaining the decrease in the descriptive journal where only exposure is taking place, and changes in the emotional journal where both cognitive changes and exposure are taking place.

The supposition that inhibition and confrontation are simply the more enduring versions of generalization and exposure is not supported by the results. Specifically, the argument that repeated inhibition leads to eventual generalization (Mowrer, 1960), which is more enduring and eventually more stressful and leads to psychological and health detriments, must encompass the notion of cognitive change in order to adequately explain the results.

Conclusion

This study found that overall, writing either a Descriptive or an Emotional journal reduced anxiety. It can therefore be concluded that writing about one's experiences helps reduce anxiety. Furthermore, it was noted that, the concept of confrontation as described in the Inhibition-confrontation Theory, was not supported because girls writing Emotional journals did not differ in anxiety levels from girls who wrote descriptive journals. An alternate explanation to the results found could be the role of journals in systematic desensitization. That is, journals could be a form of exposure to

anxiety-causing stimulus.

However, there was a non-significant trend that indicated those writing the Emotional journals may have decreased their Trait anxiety more than those writing descriptive journals. This trend would imply a more lasting change not in the way each participant initially reacted to an anxiety-causing situation (State anxiety) but rather in the long-term reaction. This suggests that exposure, which would occur in both the emotional and descriptive journal conditions would have an impact on the initial reaction to the situation, hence, no differences between the two groups for State anxiety, but confrontation would contribute to further lowering the trait anxiety. The possibility that exposure helps decrease anxiety and that another mechanism may contribute to further decrease anxiety, however not significantly, is further supported by the correlation between the use of the first person singular and the decrease in the level of anxiety across groups. This "mechanism" could in fact be cognitive restructuring. The finding that there was a positive correlation between the use of cognitive words and decreased anxiety levels would further support the cognitive component implicit in the inhibition-confrontation theory.

The finding that the control group for both State and Trait anxiety demonstrated a significant increase in anxiety levels supported the concept of inhibition, which would predict that simply not talking about anxiety could be detrimental. In sum, this study shows no support for emotional confrontation but rather a cognitive restructuring and supports the concept of inhibition.

This study's results are limited by the fact that they cannot be generalized to other populations, namely young adolescent boys and younger or older girls due to the

developmental issues mentioned previously. Also, gender issues may influence results. The results obtained may also not be generalizable to concepts other than anxiety. Specifically, the role of systematic desensitization played by journal writing may have no impact on other difficulties present in childhood like loneliness. It is also important to note that the population of participants was normal and did not have anxiety high scores.

In light of these limitations, future research should focus on the effects of journal writing in clinical populations and evaluate their efficacy for a variety of mental health issues. An experimental group, where participants would list and describe as well as write about their thoughts and feelings should be added in order to discern the contribution of exposure and cognitive restructuring. This might lead to an interaction effect indicating increased efficacy when both emotional and descriptive words are used. Considering the developmental issues raised, different age groups should be used in order to determine first how each developmental group copes and the defences used with various stressors, and secondly, to determine what elements of writing help a person at each developmental level. Similarly, gender differences should be examined. Both immediate and long term effects should be assessed in future studies, thus further clarifying the role of writing for Traits which would permit a low-cost alternative for the prevention and treatment of low to moderate anxiety.

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Table 1

T-test, mean percent of words, standard deviation, and level of significance between for Emotional Journals (EJ) (n=31) and Descriptive Journals(DJ) (n=31)

Variable	Condition	Mean % of EmotionWords	SD	*T*	Sig.
Affect	EJ	8,09	1.79	9,18**	0,00
	DJ	4,65	1.02		
Positive Emotion	EJ	8,08	0.89	4,41**	0,00
	DJ	3,39	0.88		
Positive Feeling	EJ	1,77	0.72	5,23**	0,00
	DJ	0,96	0.47		
Optimism / Energy	EJ	0,53	0.24	1,81	0,08
	DJ	0,43	0.12		
Negative Emotion	EJ	0,32	1.15	8,06**	0,00
	DJ	1,24	0.63		
Anxiety Fear	EJ	0,83	0.36	5,77**	0,00
	DJ	0,39	0.21		
Anger	EJ	0,93	0.70	2,25*	0,03
	DJ	0,61	0.32		
Sadness Depression	EJ	0,65	0.44	5,06**	0,00
	DJ	0,21	0.17		

* $p < 0,05$ **$p < 0,001$

Table 2

Correlation Between the Cognitive Word Categories and the Pre and Post Differences of State and Trait Anxiety

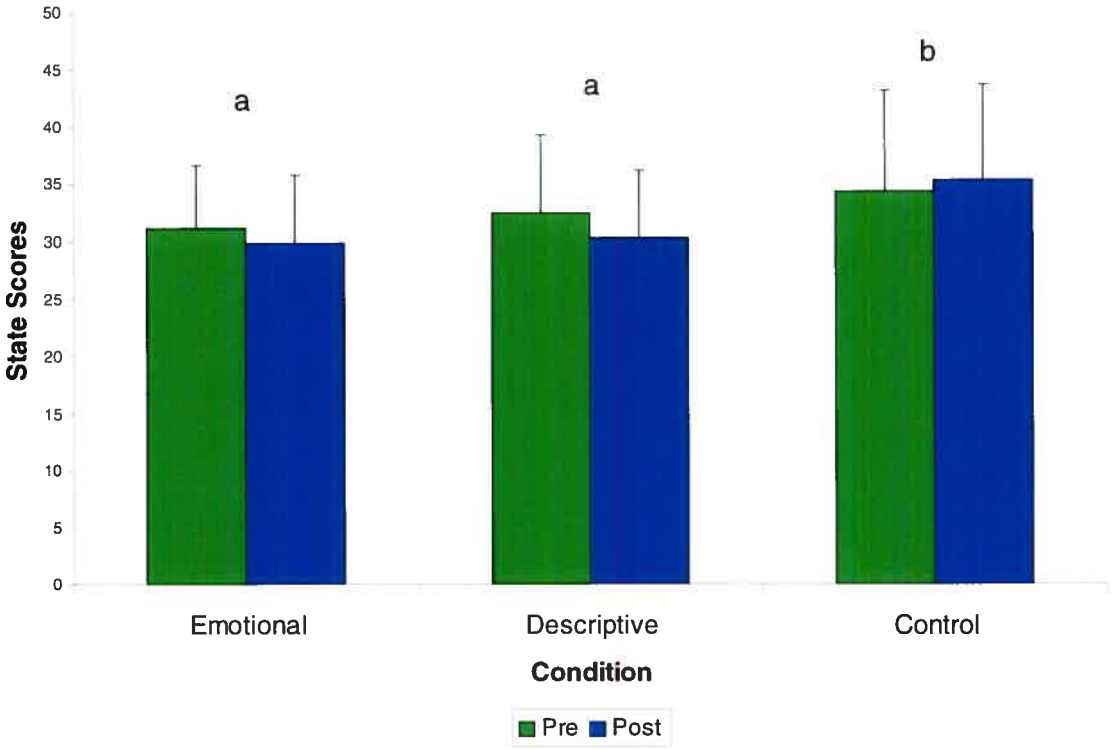
Variable	State		Trait	
	Correlation	*p*	Correlation	*p*
First person singular	0,451*	0,03	0,441*	0,035
Cognitive mechanisms	- 0,830	0,708	-0,046	0,834
Causation	-0,690	0,754	-0,037	0,866
Insight	0,659**	0,001	0,443*	0,034
Discrepancies	-0,205	0,347	0,026	0,905
Inhibition	0,297	0,168	0,152	0,490
Certainty	0,009	0,967	-0,086	0,698

* $p < 0,05$ ** $p < 0,01$

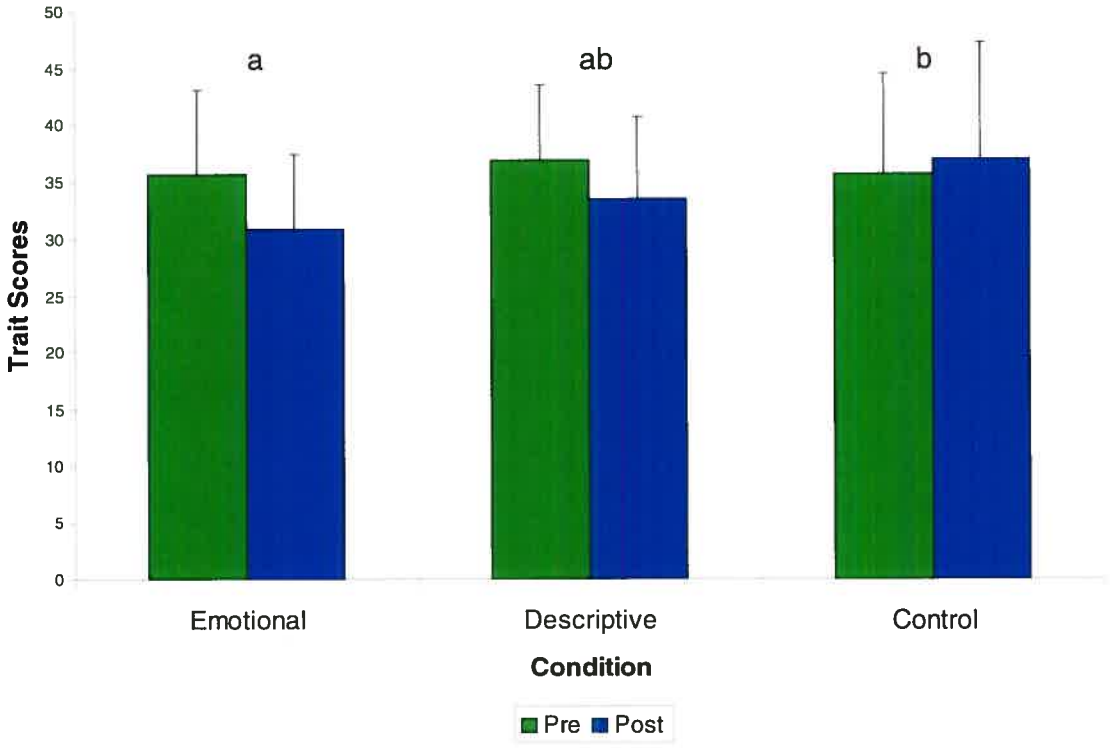
Figure Captions

Figure 1. Pre and post mean differences for State anxiety for each condition.

Figure 2. Pre and post mean differences for Trait anxiety for each condition.



Note. Different letters indicate a significant difference, $p < .05$



Note. Different letters indicate a significant difference, $p < .05$

Article 2

The impact of journal writing on internalization and externalization scores in young adolescent girls: Links between Coping theory and the Inhibition-Confrontation theory.

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Abstract

In order to evaluate the pertinence of the Inhibition-Confrontation model when applied to 12 and 13 year-old girls, the impact of journal writing for 60 girls on pre and post internalizing and externalizing scores was examined using the Youth Self Report scale. Thirty additional girls were placed in a control group. Participants were requested to complete an emotional or a factual journal. Girls who wrote about their thoughts and feelings reported significantly less internalization compared to both the group who wrote a descriptive account of their activities and to the control group. Conversely, externalization scores between groups were not significantly different. The Inhibition-Confrontation model was therefore only partially supported.

The impact of journal writing on internalization and externalization scores in young adolescent girls: Links between Coping theory and the Inhibition-Confrontation theory.

Introduction

A pervasive risk factor for psychopathology in childhood and adolescence is psychosocial stress, intimately linked to the difficult experiences traversed by children throughout these developmental periods. This is one of the reasons why the means with which children and adolescents cope with stress is so important. These mechanisms, once in place, moderate the impact of stress on present and future adjustment (Grant et al., 2003). Throughout the child and adolescent literature, the concept of coping is elucidated from various theoretical viewpoints. Three principal coping typologies emerge from the existing conceptualisations: Problem-focused vs. emotion focused, primary control vs. secondary control, and approach vs. avoidance (Ayers, Sandler, & Twohey, 1998; Compas, 1998; Ebata & Moos, 1994; Rudolph, Dennig, & Weisz, 1995).

Problem-focused vs. emotion-focused coping

Initially proposed by Folkman and Lazarus (1988) then adapted for research with children and adolescents by Compas, Malcarne, and Fondacaro (1988), the problem-focused method of coping emphasises the intent of the strategy rather than the result; what purpose does this method serve? Specifically, problem-focused coping aims to manage or change the stressor. For example, if siblings are faced with relational difficulties such as wishing to play with a toy at the same time, and one sibling resolves the difficulty by negotiating each child's time with a toy, he or she is utilising problem-focused coping. Similarly, if an individual is faced with an academic stressor caused by the inability to study due to a noisy environment, and resolves the difficulty by studying

in the library to reduce this stress, he also utilises problem-focused coping. In comparison, emotion-focused coping tends toward the management of emotional responses. Using the same example, emotion-focused coping would require that the child, when faced with having to share a toy, tempers his response by telling himself that he will get to use the toy when the other child goes to bed. Similarly, when faced with an academic stressor, imagining the testing situation cognitively before an exam in order to reduce this stress would consist of emotion-focused coping.

Primary vs. Secondary control coping

Proposed by Band, and Weisz (1988) and investigated further by Weisz, McCabe, and Dennig (1994), and Weisz, Thurber, Sweeney, Proffitt, and LeGagnoux (1997), this method of coping also accentuates the intent rather than the outcome. Primary-control involves modifying objective conditions to resolve the stressor. Studying hard with the intent of reducing academic stress would be an example of primary control coping. Secondary-control involves modifying one's own expectations, desires, behaviours or feelings such as a person telling himself that the test he will take is not really important. Failing to engage in either primary or secondary control is called relinquishing control coping, which involves doing nothing.

Approach-avoidance coping

Roth and Cohen (1986) first presented this model for adults. Approach coping referred to cognitive and emotional activity directed towards stress, for example, self-disclosure regarding a difficult or stressful day. Conversely, the goal of avoidance coping is to remove oneself from the stressor by distraction or trying not to think about a stressful situation. Approach coping was later adapted by Ebata and Moos (1991) for

adolescents and they extended its meaning to include behavioural efforts which impact directly on the resolution of the stressful situation such as approaching feared stimuli with a friend. Conversely, avoidance coping included behavioural means that result in not dealing directly with the stressor such as running away from feared stimuli.

Integrating coping theories

While the various classifications are different, there are similarities. For instance, problem-focused coping, primary control coping as well as approach coping, all endeavour to manage the stressor. For example, a child that fears water may ask a friend to accompany him. In this case, the strategy consists of problem-focused, a primary-control and an approach coping. However, approach coping may also include emotion-focused and secondary-control coping that involve bringing the individual closer to the stressor, such as a child telling him or herself that he/she has nothing to fear from water, which then allows him to approach the pool. Similarly, avoidance coping extends beyond simple emotion or secondary control coping in that it may include problem focused strategies. For instance, a child that does not go to swim class in order to avoid his/her fear of water demonstrates problem-focused and avoidant coping. Rudolph et al. (1995) suggest that these similarities, found in all three coping theories, allow for a comparison across studies regardless of their emphasis on one specific coping theory, in order to assess the impact of coping on adjustment.

Coping and adjustment

Typically coping is described in the literature as being either dispositional or situational. Dispositional coping refers to a general type of coping whereas situational coping refers to an individual's coping response in a specific situation. Literature reviews have shown that approach coping is positively correlated with greater adjustment such as a decrease in internalization (e.g., depression) or externalization (e.g., somatic complaints), discussed in detail below (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Fields & Prinz, 1997; Suls & Fletcher, 1985). Specifically, studies have shown an improvement in health, academic, emotional, behavioural and social measures. For instance, Compas et al. (2001) examined 43 studies of situational coping as well as 20 studies of dispositional coping. The authors noted that, problem-focused coping which included problem-solving, information-seeking and problem-focused support was associated with decreased internalizing behaviour. Similarly they also found that engagement coping which included problem-solving, emotional expression and support seeking was associated with a decrease in internalization. These two forms of coping, which resembled approach coping, were related to improved adjustment. It is important to assess whether children faced with clinical situations such as coping with cancer would respond differently than children who cope with more common situations such as school related stress. These studies included both individuals from clinical populations and from normal populations

In their review of 21 studies examining coping and adjustment with children, Fields and Prinz (1997) excluded clinical populations in order to study only normative samples. While the authors discuss coping in various age groups, for the purpose of this

study, only the results of the adolescent sample will be discussed. They found that for children aged 13-18, problem solving was associated with lower externalizing symptoms. Additionally, cognitive coping and cognitive reappraisal were associated with fewer externalizing symptoms such as cruel and aggressive behaviors and internalizing symptoms such as depression and anxiety.

Although the above-mentioned studies target different populations (e.g., non clinical vs. clinical, various age groups, etc…) they had similar conclusions: Regardless of the terminology used (primary control or problem-solving), approach coping seemed beneficial and was positively associated with lowered internalizing and/or externalizing symptoms. Similarly, in a meta-analysis including 43 studies of the efficacy of avoidant and non-avoidant coping strategies, avoidance as a coping mechanism was found to be effective in the short term, but not in the long term (Suls & Fletcher, 1985). Conversely, non-avoidant strategies such as attentional strategies were found to be more effective for long term adjustment. The studies included in the analysis had the advantage of using objective measures such as parent and teacher reports as well as subjective measures such as self-report scales like the Youth Self-Report (Achenbach & Edelbrock, 1979). However, literature reviews also had limitations inherently associated with them. For example, some covered studies ranging over a span of several years yet they did not include clinical populations (e.g., Fields and Prinz, 1997). For these literature reviews, effect sizes were not measured and unpublished studies were not included.

The link between coping style and mental health was further explored in a longitudinal study examining 603 adolescent girls and boys in grades six to eleven (Herman-Stahl, Stemmler, & Petersen, 1995). Two self-report questionnaires assessed

the level of depression. Multivariate analyses revealed that participants utilising approach coping reported fewer symptoms of depression compared to those who reported utilising avoidant coping. Furthermore, it was found that girls tended to use approach coping strategies more than boys. The authors concluded that children and adolescents who are able to solicit social support, problem solving and cognitive restructuring, may experience fewer adjustment difficulties in adolescence. This would imply that if adolescents could be exposed to different means of coping they could ameliorate their adjustment.

Sandler, Wolchik, MacKinnon, Ayers, and Roosa, (1997) support this idea by suggesting that intervention research should provide valuable data on the malleability of coping and the ways by which the social context can facilitate effective coping in youth. Although no studies have examined the malleability of coping with children and adolescents, the following assessed whether coping could be accelerated in adults.

Accelerating coping

Dispositional and personality-based coping models assume that individuals deal with stressful events in fixed and un-modifiable ways. Stage models of coping assume that individuals traverse well-defined stages of coping and that they cannot "skip" certain stages. Both types of models imply that coping is a process that cannot be accelerated. One study attempted to evaluate this premise (Pennebaker, Colder, & Sharp, 1990). One hundred and thirty college students, divided into two groups, were asked to fill out pre and post measures and to write about either a non-emotional subject or about their deepest thoughts and feelings relating to the high school/college transition. Experimenters hypothesised that if coping could not be accelerated, that both

groups would be equivalent upon post-test. Results found that those who wrote about their thoughts and feelings showed higher grade-point averages and higher mood ratings than those who had written about non-emotional subjects. The authors suggested that coping could be accelerated and proposed a model to account for the changes.

The Inhibition-Confrontation Theory

A model elaborating the role of two opposing processes, namely inhibition and confrontation was proposed to account for both the subjective changes such as mood and also objective changes such as grade point averages and the number of health clinic visits (Pennebaker et al., 1990). For instance, past research has found that individuals who experienced a traumatic event and did not disclose it, were more prone to illness than individuals who engaged in disclosure (Pennebaker & O'Heeron, 1984). The proposed explanatory model puts forward the idea that the disclosure of significant events in an individual's life promotes the assimilation and integration of this event. Several premises are required for the model: First, when a traumatic event is inhibited, the inhibition causes increased amounts of work, then the increased work causes stress, and last, the stress is detrimental to psychological adjustment and physical health. So as to make sense of their environment, individuals need the ability to assimilate complex events. In order to accomplish this, thoughts and feelings must be translated into language. According to the Inhibition-Confrontation theory, individuals must confront the significant event that is causing the distress in order to facilitate adjustment.

The effect of an individual's self-disclosure on the degree of internalization and externalization behaviours specifically has not been studied. If self-disclosure is effective for decreasing these behaviours, the Inhibition-Confrontation theory could

account for changes in internalization and externalization levels. According to the model, the avoidance or non-disclosure of events could lead to increased amounts of stress for young adolescents. Conversely, confronting the emotions associated with internalization and externalization such as depression and aggression respectively, should lead to greater adjustment and a decrease in internalization and externalization behaviours, thereby decreasing stress.

Several studies have supported the Inhibition-Confrontation model (Pennebaker & Beall, 1986; Pennebaker et al., 1990; Pennebaker & Susman, 1988). For example, one study divided undergraduate students into four groups and, depending on the group, asked each to write about either a trivial topic or a factual rendition of the event. A third and fourth group were asked to write about their feelings related to this event or about their feelings and the facts related to the event. Each group was asked to write for twenty minutes on four consecutive days. Total visits to the health centre for the year by students in each group were counted. The students who wrote about their feelings and the facts regarding the event and those who wrote only about their feelings were found to have visited the health centre less frequently than the other two groups. The reduction in health centre visits, which implied a decrease in illness, was attributed to the written disclosure of traumatic experiences. Additionally, the importance of disclosing both emotions and feelings in order to obtain benefits from the disclosure was emphasized (Pennebaker & Susman, 1988).

Implicit in the theory, was the process of cognitive change through written disclosure. The impact of cognitive change was examined by performing an analysis of journal content written by university students. A positive correlation between the

number of cognitive words (e.g., know, cause) and insight words (e.g., think, consider) used and the degree of adjustment reported by individuals was found (Pennebaker, Mayne, & Francis, 1997). Specifically, individuals who had reported coping better with feelings of bereavement had written more cognitive words in their texts. Comparatively, participants who reported more difficulties in coping with feelings of bereavement used fewer cognitive words in their writing. Research has also indicated a cognitive component in disclosure. For instance, Berkowitz and Troccoli (1990) showed that using language to convey emotions alters inchoate feelings and may reduce the perceived intensity of these feelings. This suggests that when individuals become more aware of their unpleasant emotions, they engage in a higher level of cognitive processing, which then allows them to gain a different perspective.

Translating events and related emotions into language requires an individual to understand and organize upsetting or novel experiences. Strategies for confronting events, that is, translating them into language, must therefore be developed in order to increase coping. Two ways of translating such events are to verbalise or to write them. It has been suggested that talking or writing about difficulties could prevent certain health and psychological problems (Pennebaker & Beall, 1986). Specifically, disclosure allows one's feelings and thoughts to become more concrete, thus facilitating understanding of the disclosed event. According to the theory, simply describing a stressful situation does not consist of confrontation; past research has indicated that in order to obtain beneficial effects from verbal or written disclosure, one must write about both the thoughts and feelings related to the event, rather than describing the event. For instance, in their study comprised of 42 college students, the participants who only described a traumatic

situation rather than both describing it and relating the thoughts and feelings associated with the event, showed no significant amelioration in health and psychological measures and grades. However, those who wrote about their thoughts and feelings showed an increase in all of these measures (Pennebaker & Beall, 1986). Hence, confrontation, within this theory, requires more than a description of the event.

Internalization and Externalization

Albayrak-Kaymak's (1999) review of the literature shows that emotional and behavioral problems are typically grouped under two categories, namely, internalization and externalization. A measure of the impact of certain stimuli on children and adolescents is the assessment of the extent of internalizing and externalizing behaviors as measured by questionnaires. Factor analysis revealed that over-controlled behaviors such as anxiety or depression, withdrawal, and schizoid and somatic complaints could be grouped as internalized behavior problems. Externalized problems typify under-controlled conduct such as delinquent, cruel, and aggressive behaviors (Achenbach & Edelbrock, 1978). Reynolds (1990) refers to the inner-directed and difficult-to-observe behaviors as "emotional problems" while outer-directed, easy-to-observe behaviors constitute "behavioral problems".

Often, internalization is associated with better adjustment because in many cultures, students with externalizing problems are the ones who primarily disturb teachers rather than those with internalizing problems. The majority of referrals made to counseling services are for children with externalizing rather than internalizing problems. However, internalizing problems, which disturb the individual himself can

lead to serious consequences such as debilitating anxiety, depression and suicide (Albayrak-Kaymak, 1999).

While these dimensions are conceptually different, they can both be found in the same person. For instance, an individual may have high levels of both anxiety and aggression. Also, depending on the environment and situation, the child may tend to have internalizing problems in one situation, such as high anxiety with an abusive parent, and externalizing problems when in another, such as aggression and bullying at school.

There is a relationship between the degree of internalization and externalization and the type of coping used. For example, a study assessing the level of adjustment in 12 to 14 year-olds classified participants in one of three groups (Internalizing, Externalizing and Well-Adjusted) based on a teacher rating scale. Seventy-one participants completed a self-report measure describing their problem-solving skills and their coping strategies. Results showed that individuals who were described as Internalizers and Externalizers by their teachers showed more cognitive avoidance than did the Well Adjusted group when faced with a controllable situation. However, when faced with an uncontrollable situation, all groups showed an equivalent amount of cognitive avoidance (Meir, 1997).

Journals and young adolescents

Parents and teachers commonly encourage children and adolescents to keep journals. Journals are also used as a pedagogical tool (Howell-Richardson & Parkinson, 1988). Despite the frequency of occurrence, the therapeutic effects of journal writing have rarely been assessed with respect to children or adolescents. Findings indicate that children and adolescents could write journals for a prescribed period of time, as do

adults in experiments. For example, journals written by children and adolescents have been used in psychology as an assessment tool in order to measure levels of anxiety and motivation instead of being used to help modify internalization and externalization. Journals have been used to study motivation by means of an experience sampling method. This involved evaluating the motivation level reported by children in their journals at predetermined times (Lavallee & Campbell, 1995). The results suggest that children and adolescents could use journal writing as a therapeutic activity in order to reduce their internalizing and externalizing behaviours. For instance, Gallant and Lafrenière (2003) investigated the effects of emotional disclosure on the physical and psychological functioning of preteen and adolescent children of alcoholics ($n = 53$). Participants were randomly assigned to one of three conditions: An emotional writing group, a non-emotional writing group, or a non-writing control group. A significant change was found for all groups over time on internalizing symptoms, affect, and physical symptoms. It would be important to verify the efficacy of journal writing in a non clinical sample.

In the present study only girls in their first year of high school were sampled because the transition from a familiar elementary school to a high school is a stressful period when they must adjust to new friends and teachers, additional responsibilities and challenges. Because girls and boys mature at different rates (De Bellis, et al., (2001), and the transition between primary and secondary school for boys may not be the equivalent of the transition period for girls, participants were limited to girls. Also there are differences in the ways with which boys and girls cope; boys tend to express distress through externalization and girls through internalization. (e.g., Gjerde (1995), Gjerde,

Block, & Block (1988), Green, Clopton, & Pope (1996), Kobak, Sudler, & Gamble (1991), Lewinsohn, Rohde, & Seeley (1993)).

The present study

According to Compas, (1988), most conceptualisations of coping were based on adult research and developmental factors were not integrated into the models. Given the recent and rapid advances in the coping research during the past years, it is important to evaluate adult models such as the Inhibition-Confrontation model of coping to determine whether developmental factors should be included when applying this theory to children and adolescents. The purpose of this study therefore, is to evaluate the pertinence of the Inhibition-Confrontation model when applied to young adolescent girls. It proposes to investigate the efficacy of journal writing on internalizing and externalizing behaviours for young adolescents, specifically 12 and 13 year-old girls. This will be accomplished by noting self-reported internalization and externalization levels among the various experimental conditions before and after the experiment. Correlations between the pre and post YSR scores and the different words used will also be examined.

It is expected that girls who write emotional journals will display decreases in internalization and externalization behaviours from pre-test to post-test, as shown by changes in the participant's self-reports, using the Youth Self-Report (YSR) (Achenbach, 1991). If the Inhibition-Confrontation model were supported, girls writing emotional journals should evidence greater reductions in YSR scores than when the girls who write descriptive journals. Evidence for cognitive change included in the Inhibition-

Confrontation theory should be apparent by a correlation between the number of cognitive words and the degree of reduction in scores across both experimental conditions.

Method

Participants

Ninety girls participated in the study. The participants were recruited, from private, Anglophone schools in the Montreal region. All participants were from similar socio-economic levels, their parents working in either Professional or Middle Management as measured by the Socio Economic Index for Occupations in Canada (Blishen, 1987). Three of the participants came from single-parent families. Thirty-one girls and 30 girls were randomly assigned to the Emotional Journal group and the Descriptive Journal group respectively. Twenty-nine girls in a separate classroom from the same school were assigned to a control group. During recruitment, two girls failed to obtain parental permission to participate. Three participants were lost though attrition. One of the journal participants was omitted from the analysis because her teachers initially evaluated her writing skills to be too limited for the task and would have probably been unable to complete the assignment within the allotted time. In all, 90 girls participated in the study.

Materials

Journals. Journals have not been used previously with children as a therapeutic tool, and therefore there were no available journal models in the literature. As a result the experimenter designed the journals used in the study. A "duo-tang" folder was

provided for each of the participants that included general instructions. Depending on the experimental condition, specific directives for each journal entry with respect to what he/she should write were included. In a review of the literature, Fields and Prinz (1997) noted that stressors often identified as salient from a child's perspective included social stressors, academic stressors, and self-identified stressors. Journal instructions therefore, encouraged participants to discuss these concerns. For example, they were asked to consider their thoughts and feelings about coming to high school, thus encouraging them to write about academic concerns. Asking about their thoughts and feelings regarding making friends encouraged them to discuss social concerns. Requiring participants to identify what put them in a good mood or a bad mood during the week encouraged them to discuss self-identified concerns. The instructions varied depending on the condition. For instance, the girls in the Emotional Journal condition were asked to write about their emotions, their thoughts and their feelings in an emotional journal (see Appendix F). The girls in the Descriptive Journal condition were asked to list and describe events in a descriptive journal (see Appendix G). Both journals included space for twelve entries of one full page each (three times a week for one month). All journals were numbered according to the condition and the subject number. In order to maintain confidentiality, after the journals were collected, names were removed and replaced with a subject number allowing the researcher to pair the journals with the adjustment measures, and to classify the participants in their respective groups. In a third group, the control group, participants only filled out the pre and post measures.

Child Behavioural Checklist (CBCL). Information regarding the participant's general adjustment as well as behavioural observations were collected through the Youth Self-Report (YSR) form. The YSR is a measure consisting of 112 questions and designed for individuals aged 11 to 18. According to the manual (Achenbach, 1991), they require an average of 10 to 15 minutes to administer. Ratings are based retrospectively on behaviours within the past six months. The problem items are scored on a three-point Likert scale ranging from 0 (not true) to 2 (very true or often true). Scales included in this profile assessed the internalizing and externalizing behaviours. Internalizing scales comprised Somatic Complaints, Anxious/Depressed, and Withdrawal. Externalizing scales included Aggressive behaviour, and Delinquent behaviour. The YSR, unlike some other adjustment scales, therefore provided for a multi-axial assessment of adjustment and the format of the YSR allowed for the comparison of Internalizing and Externalizing behaviours.

The YSR is well standardised, and has adequate reliability and validity: The Youth Self-Report has been normed on a sample of 1,315 boys and girls between the ages of eleven and eighteen and was shown to have a Cronbach *alpha* of $r = 0.74$ (Achenbach & Edelbrock, 1979). In a validity study, clinically referred children obtained, as expected, significantly lower scores than non-referred children for most of the problem and competence items (Edelbrock & Costello, 1988). Studies indicate that there is a degree of convergence between the YSR and DSM diagnoses (Weinstein, Noam, Grimes, Stone, & et al., 1990). The YSR has been well normed with respect to socio-economic status, ethnicity, region, and urban-suburban-rural residence

(Achenbach, 1991). Test-retest reliability for one week is high, with a mean of $r = 0.87$ for all competence scales and mean of $r = 0.89$ for all problem scales.

According to the hypothesis, it was expected that there would be an increase in adjustment as demonstrated by a decrease in YSR scores. More specifically, it was expected that the overall, internalizing and externalizing scores for the YSR would decrease significantly.

Procedure

Those who agreed to participate in the study were randomly assigned to either the experimental Emotional Journal writing condition which asked the participants to write about their emotions, their thoughts and their feelings (e.g., the events that put them in a good mood during the week), to the Control condition, or to the Descriptive Journal writing condition which asked for a non-emotional description of the events of the day (e.g., to list and describe what they did after school that week).

Each participant was seen in a quiet area in the school where they received the CBCL pre-test and individual instructions detailing how to use the journals and the written instructions were reviewed (Appendix D). Furthermore, they were informed that whatever they wrote in their journals, and whatever they answered in the questionnaires would remain confidential and that they could withdraw at any time.

During the next four weeks, the participants in the experimental conditions completed their journals during the class time allotted by the teachers. Each participant was again administered the adjustment measures at the end of four weeks when all of the twelve journal entries had been completed. Any questions and comments were addressed at this time.

Results

The data from 90 of the girls who participated in the study were included in the analyses. One of the journal participants was omitted from the analysis because she was initially evaluated by her teachers to be unable to complete the assignment within the allotted time. Additionally, four participants failed either to complete the journals or the post-test evaluation.

Manipulation Check

The primary assumption of the experiment was that participants assigned to either the Emotional Journal condition or the Descriptive Journal condition followed the instructions so as to ensure that participants in the Emotional Journal condition wrote more emotional words than did the participants in the Descriptive Journal condition. *T*-tests comparing the mean percentages of emotional words for given emotional dimensions (defined by the LIWC) found in both journal conditions were performed. Appendix J shows the general affect category (which includes all emotional words), general emotion categories, sub-categories and the corresponding definitions and examples for each of these. Significant differences between the mean percentage of words in the Emotional Journal condition and the Descriptive Journal condition were found for the general Affect category indicating that overall, more affective words were used in the Emotional Journal condition when compared to the Descriptive Journal condition. Furthermore, the Positive Emotions and Positive Feeling categories and the corresponding sub-categories of Anxiety/Fear, Negative Emotions, Anger, and Sadness/Depression were examined. Emotional Journal participants wrote significantly more emotional words than did their counterparts in the Descriptive Journal condition.

Only the Optimism/Energy sub-dimension failed to show a significant difference with the Emotional Journal participants, writing slightly more than the Descriptive Journal participants. Table 1 shows *t*-tests, mean differences and standard deviations between the mean percentage of emotional words found for Emotional and Descriptive Journal conditions.

YSR

A 3(condition) X 2(pre-test/post-test) MANOVA with repeated measures on the dependent variables (Internalization and Externalization) was performed to determine whether there were self-reported changes in internalization and externalization scores.

Both experimental groups and the control group showed a significant reduction from pre to post-test (within subjects) measures, demonstrated by a main effect for the pre and post condition, $F(2) = 23.34$, $p < .01$.

There was a significant interaction between the conditions and the pre and post-tests $F(2) = 19.11$, $p < .01$. Figure 1 and Figure 2 showing the pre and post mean differences and confidence intervals for Internalization and Externalization respectively, illustrate the relationship revealed between the groups. Different letters denote significant differences.

Internalization. Post hoc analysis using Tukey's HSD revealed no significant differences between the three conditions for the pre-test, indicating that the groups had on average, equal internalization scores before the journal writing began. However, post-test comparisons revealed that the Emotional Journal condition was significantly different from both the Descriptive Journal condition and the Control condition at the

.05 level. Specifically, the participants who wrote emotional journals showed a decrease in internalization scores compared to those who wrote descriptive journals or to those who did not write anything (See Figure 1). Additionally, there was a nonsignificant trend suggesting that the descriptive journal group decreased internalization while internalization scores increased in the control group.

A correlation between the frequency of cognitive words written in the journals and the "insight" variable was not evident. However, a correlation between these words using only the 15 participants who showed the most difference between their pre and post internalization adjustment measures showed a trend toward significance (r = -0.434, p = 0.056) for the use of the first person singular words. That is, girls who showed the most decrease in internalization scores tended to use "I" more often than did those who showed less change in internalization scores.

Externalization. Post hoc analysis using Tukey's HSD revealed no significant differences among conditions before journal writing indicating that the groups had on average, equal externalization scores before the journal writing began. Significant differences were not found for externalization scores on the post-test, indicating that journal writing did not significantly change the externalization scores of the participants. The significant findings of the post hoc tests for internalization and the non-significant findings for the post hoc tests for externalization would tend to account for the interaction effect initially reported.

Discussion

Initially, the Emotional journal group, Descriptive journal group and the Control group showed no significant differences in their scores on the YSR, indicating that at the beginning of the study all three groups were equivalent and reported the same levels of internalization and externalization. After the two experimental groups wrote journals, they evidenced decreases in both internalization and externalization from pre to post-test, however these changes were not significant for both conditions. That is, girls who wrote about their thoughts and feelings regarding their activities reported significantly less internalization compared to the group who wrote a descriptive account of their activities and those who did not write a journal. This finding supports the notion that in order for individuals to confront inhibited thoughts and for them to benefit from journal writing, they must write about their emotions rather than using only descriptive phrases (Pennebaker, 1997).

The findings for internalization are consistent with the Inhibition-Confrontation hypothesis, which predicted that girls who had written emotional journals would display decreases in self-reported internalization from pre-test to post-test, as shown by changes in children's self-reports, using the YSR (Achenbach, 1991). Therefore, for young adolescents as with adults, certain types of coping also seem malleable in the sense that switching to an approach-coping strategy reduces internalization symptoms. However, the results for the self-reported externalization scores did not support the Inhibition-Confrontation theory. Specifically, although there was a nonsignificant trend suggesting that emotional disclosure was more beneficial than descriptive disclosure,

which, in turn was more beneficial than no disclosure at all, the differences were nonsignificant.

Similarly, the Inhibition component of the theory, which is, not writing about a stressful event, was supported by the increase in self-reported internalization in the Control group. According to the theory, inhibition would result in an increase in stress, which would be detrimental to psychological health, indicated, in this case, by an increase in internalization scores for the girls who did not write journals. However, the results do not indicate whether this increase in anxiety is a result of inhibition or whether a different process could account for the increase in anxiety. For instance, the control group may have engaged in a stress-producing activity such as completing extra homework while the other groups were journal writing, thereby increasing the YSR scores. Conversely, there was no support for the inhibition component of the theory when examining the self-reports of externalization because there was no evidence of increased stress resulting from inhibition in the control group. That is, girls in the control group did not have significantly different externalization scores on the YSR post-test.

Why would changes in internalization scores be significant while changes in externalization scores remain unchanged? The passage of time could account for these differences. Specifically, the effect of confrontation demonstrated by the differences in the pre and post-test data for externalization may have been greater if individuals had written for a longer period; or had completed a delayed post-test. In other words, individuals may have detected change in their affect more quickly (anxiety and depression) after writing an emotional journal, however they may not have persisted

long enough to change their behaviour (externalization).

An alternative explanation lies in the fact that, as previously discussed, internalization and externalization are two different concepts that have been statistically derived. Perhaps the internalization and externalization are affected differently by approach coping. While approach coping may help reduce internalization via cognitive change, which is an effective therapy for anxiety and depression (discussed below), it may not affect externalization in the same degree, or its effect may not be immediate.

Cognitive restructuring is an aspect of cognitive therapy that permits an individual to identify negative, irrational beliefs that are often responsible for psychological difficulties and replace them with objective, rational statements (Beck, 1963). The process has also been called reappraisal, relabeling, reframing, and attitude adjustment. An individual must be able to understand and recognize these beliefs in order to replace them. Evidence for cognitive change as indicated by the Inhibition-Confrontation theory should have been apparent by a correlation between the number of cognitive words and the degree of reduction in scores across both the descriptive and the emotional conditions. That is, the more participants used cognitive words to understand their situation, the greater their adjustment should be. A correlation between the frequency of cognitive words written in the journals and insight words was not found. However, an almost-significant correlation was found when examining the journals of 15 participants who demonstrated the most difference between their pre and post internalization measures. That is, the girls who showed the most decrease in internalization scores tended to use "I" more often than did those who had less change in adjustment.

Why would using the first person singular promote adjustment in young adolescents? Erikson, when discussing the role of the first person singular stated that, "...to ignore the conscious "I" in its relation to its existence means to delete the core of human self-awareness, the capacity, which, after all, makes self-analysis possible" (Erikson, 1968, p. 219). Previous studies which explored the impact of journaling on adjustment with adults however, have not reported correlations between the first person singular and adjustment. Why then would young adolescents evidence a process not found in adults? Developmental issues may explain this difference. Lahey and Strauss (1982) reported that older children, adolescents and adults report being able to recognize irrational fears while younger children cannot. The difference between children, adolescents and adults in the processing of cognitions may be one explanation as to why no previous correlations between the use of the first person singular and adults were found.

Additionally, the use of the first person singular may be an intermediary step used by children and young adolescents in order to organize their thoughts and identify erroneous cognitions. The behaviour then declines as adulthood approaches, similar to the egocentric speech described by Vygotsky (1962) as an intermediary to inner speech, that declines as inner speech appears. This may have a role in helping the young adolescents define their identity.

According to Elkind (1967) along with the onset of formal operational thought, children at the age of 11 or 12 years demonstrate adolescent egocentrism, which consists of them believing that their preoccupations and thoughts reflect what others may also be thinking; that others are also preoccupied by them. Similarly, according to Erikson,

during the developmental stage implicating identity cohesion or role confusion, adolescents may be "… curiously preoccupied with what they appear to be in the eyes of others as compared to what they feel they are" (Erikson, 1968, p.128). The use of the first person singular in this case may be an indication of the efforts made to establish an identity. Specifically, as young adolescents try to confront their cognitions rather than inhibit them, they would try to explain others' behaviours as thoughts similar to their own, thus the increased use of the word "I" not otherwise noted for adults. Results therefore indicate that writing a description of events and writing about emotions differ both in the degree of insight produced and in the ability to use the first person singular in order to better organize thoughts.

Conclusion

The results support the notion that, as with adults, coping in children can be malleable. That is, a decrease in internalization can be achieved by approach coping, similar to the concept of confrontation for adults, proposed by Pennebaker et al. (1996). Furthermore, the change in coping can be achieved through disclosure, namely through emotional journal writing. However, not all types of adjustment seem to be affected to the same degree. For instance, externalization scores were not significantly affected by journal writing although a trend was apparent. These results encourage caution as to the generalizability of theories like the Inhibition-Confrontation theory for young adolescents and children specifically, because the theory cannot be applied indiscriminately to all psychological concepts. Additionally, the cognitive aspects of inhibition-confrontation are not directly apparent for children but rather manifest

themselves through the increased use of the first person singular. This usage, although not manifest with adults, may be an intermediary step between insight and cognitive change and may be a developmental characteristic which, is eventually unnecessary for cognitive change.

Although the results partially support the Inhibition-Confrontation theory, it is important to note that many limitations prevent the generalizability of the study. First, the study samples only 12- to 13- year-old girls. As previously mentioned, girls tend to report and demonstrate a higher level of internalization than do boys. It is possible that boys participating in a similar study would not benefit as much from journal writing simply due to a floor effect whereby their scores, already low, could not be significantly lowered. The study can therefore not elucidate the impact of journal writing for boys. Also, older girls may also respond differently to journal writing, which would be evidenced by a decrease in the correlation between adjustment and the first person singular and an increase in cognitive words. Developmental stages such as concrete operational thought, as well as dispositional coping styles, should be assessed in order to determine the impact of each on the efficacy of journal writing. Future studies should therefore study both boys and girls at various age and developmental levels. Additionally, the journal writing intervention occurred over a relatively short amount of time and long term effects of journal writing should be examined. Future research should also focus on the effects of journal writing in clinical populations and evaluate their efficacy for a variety of mental health issues such as Anxiety, Depression and Eating Disorders. Journal writing shows promise as a tool for young adolescent girls in a

normal population in order to increase coping skills, specifically for decreasing internalization and also for long-term stress reduction.

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Table 1

T-test, mean percent of words, standard deviation, and level of significance between for Emotional Journals (EJ) (n=31) and Descriptive Journals(DJ) (n=31)

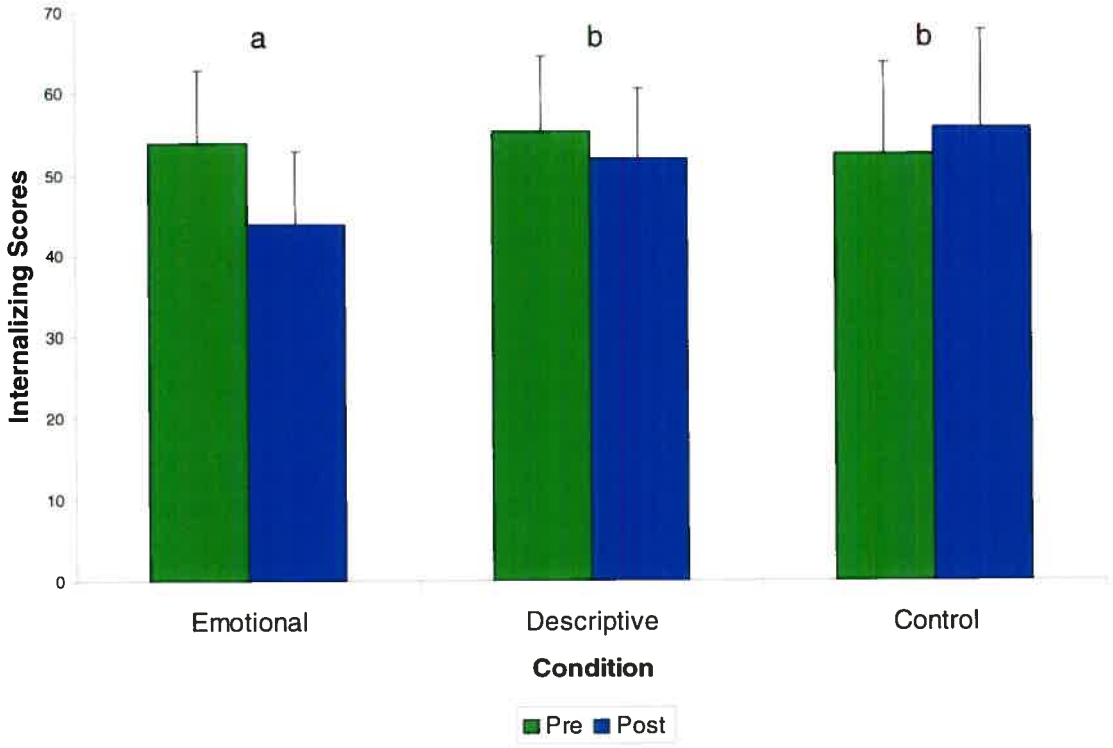
Variable	Condition	Mean % of EmotionWords	SD	*T*	Sig.
Affect	EJ	8,09	1.79	9,18**	0,00
	DJ	4,65	1.02		
Positive Emotion	EJ	8,08	0.89	4,41**	0,00
	DJ	3,39	0.88		
Positive Feeling	EJ	1,77	0.72	5,23**	0,00
	DJ	0,96	0.47		
Optimism / Energy	EJ	0,53	0.24	1,81	0,08
	DJ	0,43	0.12		
Negative Emotion	EJ	0,32	1.15	8,06**	0,00
	DJ	1,24	0.63		
Anxiety Fear	EJ	0,83	0.36	5,77**	0,00
	DJ	0,39	0.21		
Anger	EJ	0,93	0.70	2,25*	0,03
	DJ	0,61	0.32		
Sadness Depression	EJ	0,65	0.44	5,06**	0,00
	DJ	0,21	0.17		

* $p < 0,05$ **$p < 0,001$

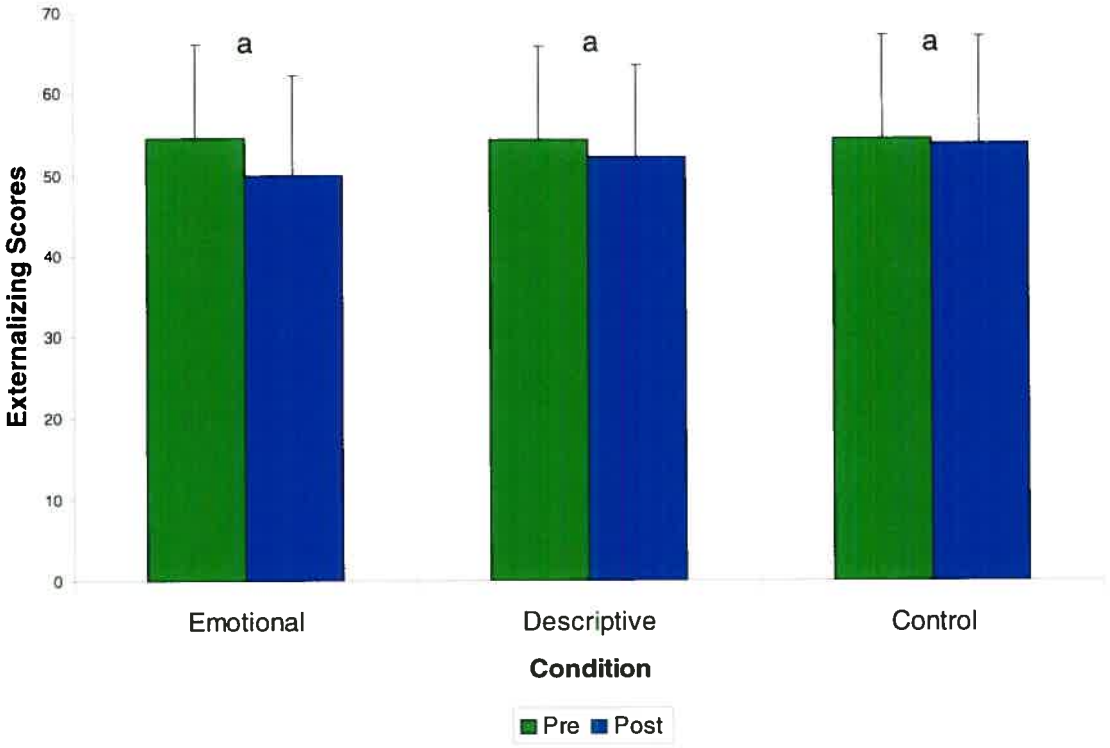
Figure Captions

Figure 1. Pre and Post Mean Differences for Internalizing Scale of YSR

Figure 2. Pre and Post Mean Differences for Externalizing Scale of YSR



Note. Different letters indicate a significant difference, $p < .05$



Note. Different letters indicate a significant difference, $p < .05$

Article 3

Running Head: A DESCRIPTIVE ANALYSIS OF JOURNAL ENTRIES

An analysis of structured journal entries:

What young adolescent girls write about in their journals.

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Abstract

The structured journal entries of 60 young adolescent girls were analyzed using a 4 (Question type) X 7 (Word category) ANOVA. The first goal of the study was to determine the themes spontaneously revealed by them in the form of their personal concerns. Past studies have indicated that specific forms of disclosure, such as using a higher frequency of cognitive words, enhances adjustment in young girls. Prompting the discussion of particular topics therefore, may facilitate this type of expression. Thus, the second goal was to establish clinically relevant topics that could encourage adolescent girls to verbalize their thoughts so as to favor adjustment. Certain themes predominated in the journals. Detailed suggestions for clinicians are put forward.

An analysis of structured journal entries: What young adolescent girls write about in their journals:

Some issues faced by young adolescent girls remain constant while others change with the times. Among the varying concerns, family structures have become more complex, there are increasing incidents of drug use, violence and bullying in the schools, and societal pressures force young girls to become aware of their sexuality at younger ages. It is important for therapists to become aware of the themes preoccupying this age group in order to maintain an accurate outlook so as to better address these issues. It is with these goals in mind that studies have explored which topics preoccupy adolescents the most. For instance, Carr and Schmidt (1994) using an anonymous questionnaire to survey eight graders' concerns, determined that although both boys and girls confronted similar issues, girls tended to rate their preoccupations significantly higher indicating greater concern. Among the highest rated issues were: good grades, parent's health, friends or family members dying, taking tests, not being attractive, going to high school, dying and getting AIDS. Similarly, Boehm, Schondel, Ivoska, Marlowe, and Manke-Mitchell (1998) found in their survey of calls by young teens to telephone help lines that peer relationships, sexuality, family problems, self-esteem, drugs and alcohol were the main issues. Both articles noted that although some concerns remained present regardless of the zeitgeist (e.g., death, and relational difficulties) others varied as the school and family environment changed (e.g., fear of getting AIDS, drugs). The first goal of the present study was to determine the themes spontaneously revealed by adolescent girls in their journals so as to establish their current concerns.

Studies suggest that specific forms of self-disclosure seem to be associated with better adjustment. For example, journal writing and diary keeping can have therapeutic value for adults (e.g., Pennebaker, Colder, & Sharp (1990); Smyth, J. M. (1998)). More recently, studies have shown that journal writing in children aged from 8-12 years can decrease anxiety (Reynolds, Brewin, & Saxton, 2000). Also, Muris, Meesters, and Gobel (2002) studied the cognitive component of cognitive behaviour therapy relating to anxiety problems through a writing intervention with twenty-four 8-12 year-olds. Results showed that levels of anxiety decreased substantially for both writing and non-writing (cognitive intervention) conditions after the interventions. The present study, which explores the content of adolescent girls' structured journals, is based on the results of two investigations examining the efficacy of journal writing on State and Trait anxiety (Joncas & O'Neill-Gilbert, 2004a) and on Internalization and Externalization (Joncas & O'Neill-Gilbert, 2004b). In the first study, it was found that regardless of whether participants wrote descriptive or emotion-based journals, both benefited from a reduction in anxiety. Similarly, in the second study, internalization scores on the Youth Self-Report scale showed significant decreases when girls wrote journals with emotional content rather than journals with descriptive content. In both studies, trends emerged indicating that certain aspects of the content were associated with decreased anxiety, and less internalization. Specifically, it was found that when girls were disclosing their emotions, the more they used the first person singular, the greater the reduction in State anxiety. Furthermore, the greater the frequency of cognitive words used, the greater the reduction in anxiety. A similar trend was found between decreases in internalization and

the use of the first person singular, which may be an indication of the efforts made to establish an identity.

Determining the subjects that facilitate the use of the above-mentioned words could perhaps, in a therapeutic setting, encourage disclosure. Self-disclosure is an interpersonal process by which individuals share knowledge about themselves with others. In fact, Sydney Jourard, a pioneer in the study of self-disclosure states,

> Through my self-disclosure, I let other know my soul. They can know it, really know it, only as I make it known. In fact, I am beginning to suspect that I can't even know my own soul except as I disclose it. I suspect that I will know myself "for real" at the exact moment that I have succeeded in making it known through my disclosure to another person. (Jourard, 1971, p.32).

Self-disclosure is also an intrapersonal process, allowing for insight and cognitive change (Derlega, Margulis, & Winstead, 1987). It has been shown to have beneficial psychological and physical effects (Blackburn, 1965; Kilpatrick, Resick, & Veronen, 1981; McClelland, 1979; Pennebaker & Beall, 1986; Pennebaker, Colder, & Sharp, 1990). Prompting or encouraging individuals to discuss specific topics using a semi-structured format as an intervention strategy may encourage disclosure by giving individuals an opportunity to address the subject. For example, Owen, Yarbrough, Vaga and Tucker (2003) investigated communication among 163 individuals (63 males and 100 females) participating in Internet support groups. The hypothesis was that preparation for the online groups would increase levels of disclosure. Participants were randomized to one of three preparation groups: minimal instruction, detailed instruction with social modeling, and detailed instruction with social modeling and practice. Results

showed that for all participants, total word count and raw use of affect and cognitive-related words were higher on the days when participants were prompted to discuss specific aspects of their loved one's cancer experience. It was suggested that if a semi-structured format for group discussion was provided, extensive preparation for group participation consisting of interviews with new members and films that portray a model group that have been shown to be beneficial might not be necessary. The authors concluded by stating that prompting emotional disclosure and cognitive processing through initial questions may be sufficient to encourage disclosure among college students.

The second goal of the present study was to determine the subjects that evoked the most frequent use of these words. In light of the fact that certain forms of disclosure such as a more frequent use of both cognitive words and of the first person singular "I" seem to benefit young girls, and that prompting the discussion of specific topics may facilitate emotional expression, structured journal entries of young adolescent girls were analyzed.

Method

Participants

Participants were recruited, from private, all girl, Anglophone schools in the Montreal region. All participants were from the same upper middle class socio-economic level, their parents working in either Professional or Middle Management as measured by the Socio Economic Index for Occupations in Canada (Blishen, 1987). Furthermore, three participants came from single-parent familieis. Additionally, participants were screened with the STAIC for high levels in anxiety and, had they

shown high levels, would have been excluded. Girls were randomly assigned to the Emotional Journal (n = 31) group and the Descriptive Journal (n = 30) group respectively. Twenty-nine girls in a separate classroom from the same school were assigned to a control group. During recruitment, two girls failed to obtain parental permission to participate. Three participants were lost though attrition. In all, ninety girls participated in the study and were aged 12 and 13 (M =12.9, SD = 0.3).

Materials

Journals. Journals have not been used previously with young adolescents as a therapeutic tool, and therefore there were no available journal models in the literature. As a result, the experimenter designed the journals used in the study. A "duo-tang" folder was provided to each of the participants and included general instructions and, for each journal entry, information with respect to what they should write. These instructions varied depending on the condition. In a review of the literature, Fields and Prinz (1997) noted that stressors often identified as salient from an adolescent's perspective include social stressors, academic stressors, and self-identified stressors. Journal instructions therefore, encouraged participants to discuss these concerns. For example, participants were asked about their thoughts and feelings about coming to high school, thus encouraging them to write about academic concerns, while asking participants about their thoughts and feelings regarding making friends encouraged them to discuss social concerns. Asking participants to identify what put them in a good mood or a bad mood during the week encouraged them to discuss self-identified concerns. Girls in the Emotional Journal condition (the experimental group), were asked to write about their emotions, their thoughts and their feelings (see Appendix F). Girls in the

Descriptive Journal condition were asked to list and describe events (see Appendix G). Both journals included space for twelve entries (three times a week for one month). All journals were numbered according to the condition and the subject number. In order to maintain confidentiality, after the journals were collected, names were removed and replaced with a subject number allowing the researcher to pair the journals with the adjustment measures, and to classify the participants in their respective groups (control or experimental groups).

LIWC. Linguistic Inquiry and Word Count (LIWC) is a text analysis application designed to study the various emotional, cognitive, structural, and process components present in individuals' verbal and written speech samples. The LIWC was developed as part of an exploratory study of language and disclosure (Francis, 1993; Pennebaker, 1993). According to the authors, "Its dictionary is composed of 2,290 words and word stems. Each word or word-stem defines one or more word categories or sub dictionaries. For example, the word 'cried' is part of four word categories: sadness, negative emotion, overall affect, and a past tense verb. Hence, if it is found in the target text, each of these four sub dictionary scale scores will be incremented."(Dougall et al., 2001). LIWC calculates the percentage of words of 74 predetermined linguistic categories for a written or a spoken text (Pennebaker & Seagal, 1999). Independent judges' ratings of texts have been found to be highly correlated with LIWC scales based on the same texts. For instance, the affective process word category correlations between the judges ratings and the LIWC ranged from $r = 0.57$ to $r = 0.75$, thus supporting the LIWC's validity. Additionally, several studies have successfully utilised the LIWC as a means to assess written content (Owen et al., 2003; Stephenson, Laszlo, Ehmann, Lefever, & Lefever,

1997; Vano, 2002). Certain drawbacks of the LIWC have also been noted (Owen et al., 2003). Specifically, because the LIWC relies only on word frequency, the interpretation of these frequencies may be skewed because words that convey emotional meaning need not be frequent to alter the meaning of an entire passage. Interpretation of frequencies must therefore be made cautiously.

The content of the journals in the present study were grouped according to the broad categories provided by the LIWC, which consisted of the following variables: Social processes, Cognitive mechanisms, Affect, Occupation, Leisure activities, and Physical preoccupations.

Questionnaires. All groups completed the State Trait Anxiety Inventory for Children (Spielberger, 1973) and the Youth Self-Report (Achenbach, 1991) before beginning the journal writing and at the end of the one-month period.

Procedure

The data collected in the journal entries was obtained during the course of a study examining the effect of journal writing on adjustment. Those who agreed to participate in the study were randomly assigned to one of the following conditions: The experimental Emotional Journal writing condition asked them to write about their emotions, their thoughts and their feelings (e.g., the events that put them in a good mood during the week). The control condition also involved completing the pre and post measures at the same time interval as the experimental groups, but unlike these groups, not completing a journal. The Descriptive journal writing condition asked for a non-emotional description of the events of the day (e.g., to list and describe what they did after school that week).

Each participant was seen in quiet area where they received individual instructions on how to use the journals and the written instructions were reviewed at the time of testing (Appendix D). Furthermore, they were informed that whatever they wrote in their journals, and whatever they answered in the questionnaires would remain confidential and that they could withdraw at any time.

During the next four weeks, all 90 participants completed their journals during the class time allotted by the teachers. Each participant was again administered the questionnaires at the end of four weeks when all of the twelve journal entries had been completed. Any questions and comments were addressed at this time.

Results and Discussion

Journal content

In order to allow therapists and counselors to be better aware of topics perceived to be pertinent by young adolescent girls, the content of each journal was described so as to determine the extent to which specific personal concerns were discussed. To achieve this objective, journals were processed and each word was classified into predetermined themes using the LIWC (Francis, 1993; Pennebaker, 1993). Thus, each sentence encompassed linguistic dimensions, psychological processes such as social processes, affect and cognitive mechanisms and personal concerns such as leisure activities, occupation and physical preoccupation.

Figure 1 represents the mean percentage of words used in each word category throughout the journals across all questions. Almost 50% consisted of Linguistic Dimensions included the use of the first person singular which accounted for 16% of the Linguistic Dimensions category. The significance of the first person singular will be

discussed below. Thirty-six percent of the content was linked to psychological processes (social processes, affect and cognitive mechanisms) while the remainder reflected personal concerns. The most frequently used words, aside from the linguistic dimensions, represented social processes (14.9%). Examples of words classified as social processes included: talk, share, friend, and group. The following excerpts are examples of entries from Descriptive and Emotional journals, both of which included many social, cognitive or emotional words. The examples used, although particularly intense were not uncommon. This excerpt from an emotional journal entry frequently mentioned social process words which are italicised in this example:

> "My *boyfriend*, no *ex-boyfriend* told all his *friends* that I was a s---! (Letters omitted from journal). It's not true! He is lying. I don't deserve to be called that or to be humiliated. I was mortified when my *friends* told me…"

In this case, the frequent mention of social relations such as the words friend and boyfriend contributed to increasing the percentage of social words used. It is important to note that although it is not analysed, much information can be obtained from this excerpt where the participant refers to not only to her individual relationships but also her group relationships.

Cognitive mechanisms that included words like think, cause, know and should were used on average 10.5% of the time. An example of an emotional journal entry containing many cognitive words (italicised) was the following:

> "One of my friend's brother just committed suicide… I was not *sure what* exactly to say to my friend. I *know* she misses her brother very

> much and I *know* she loves him a lot. I never really *thought* about all of that seriously before. I never *thought* it could hit so close. *Why* do things like that happen? I really *wish* I *knew what* to say and do."

In this example, words like sure, know, thought, why and knew contribute to increasing the percentage of cognitive words. In this entry the use of cognitive words seems to be a key factor in allowing the participant to organize and understand the event and may be one of the reasons why journals are effective in increasing adjustment.

Affective words such as happy, pride, cry and hate were also used 10.2% of the time. The following is from an emotional journal entry in which many affective words (italicised) were used:

> "My cat had feline leucopenia something like that. That is cat cancer. That means that we will have to have our cat put to sleep. I am so *sad*. It is not fair! My mom does not even want to try to treat the cat because it costs too much. My mom is *heartless*. She is cheap. She will not pay for surgery or chemotherapy for my cat. She does not realize that my cat is my best friend. That she is *essential* to my survival. That I *love* my cat so much and that I will *hurt* so badly when the cat goes to the vet tomorrow or else it would be *cruel* because she would be in *pain*. I do not want to be *mean* or *cruel* or make my cat *hurt*. I am sure she will *feel* it before we go bring her and she will know we are going to *kill* her. I will *miss* her and I *love* her and I do not want her to *die* and I am *unhappy*."

In this example, the words such as sad, fair, heartless, love, hurt, badly, cruel, pain, mean, and unhappy contributed to elevating the percent of affective words used.

Determining personal concern. Throughout the journals, personal concerns were present 8.9% of the time, even when there were psychological processes present. In fact, Personal Concerns were the least frequent and consisted of the following categories: Occupation, Leisure Activities, Physical States, Money and Metaphysical concerns. Occupation (5.3%) included words like class and student. Leisure activities (2.5%) included words such as house and sports. Physical states (1.1%) included words such as eating, body, and illness. Figure 2 shows in detail the topics discussed in the Personal concerns categories. The most frequently mentioned were school, home, achievement and bodily preoccupations. However, regardless of whether there were fewer words addressing these personal concerns overall, their importance must be recognized. For instance, Owen et al. (2003) caution that "analysis of the percentage of total words that are related to any of the linguistic dimensions captured by LIWC could overshadow important elements of communication". For example, consider the two following excerpts taken from different weeks of one same descriptive journal:

> "This week I went to the hospital because I am sick. I have an infection of the breast. I have to have an intravenous put into my arm because it has to go directly into my blood stream to kill off the bacteria. My breast is swollen, red, hard, and very painful. I had a high fever and a headache. I have to go back to the hospital every morning to receive antibiotics through my intravenous. It is painful. My fingers turn cold and I feel the cold medicine going through my veins. My chest also really hurts. I have to walk slowly so I will not feel any pain. I am going to miss a lot of school because I have to stay in the hospital for my treatment. I'm scared"

> "This week I had to go back to the hospital. It was urgent. I had my surgery done but there is still a lump in my right breast. The doctors think that it is fibro adenoma. It will have to be removed I will have to be put asleep. They also found this weird bacteria growing in me. It can only be killed by using penicillin, which I am allergic to. I am also very young to get all these problems. This usually happens to people who are twenty to thirty years old. It rarely happens to twelve year olds!"

Both entries have frequent references to physical states, and there are relatively few emotional or cognitive words used. Therefore, it is important to consider that an analysis of the percentage of total words that are related to any of the linguistic dimensions captured by LIWC offers only one of many interpretations; in some cases an analysis of total words used that were either emotion-based or cognition-based, might better represent the level of emotional and cognitive discourse for a participant. For example, the percentage of the total words related to both affect and cognition could be low for participants writing entries with much emotional disclosure and cognitive processing. Additionally they could provide detailed descriptive accounts of their experience such as the excerpt above. Therefore, in addition to describing the content of journals to better understand the pertinent topics addressed by young adolescent girls, the impact of using certain words rather than others will be examined in order to facilitate the use of these words in a clinical setting.

Promoting the use of beneficial disclosure

The second goal of the present study was to analyze the journal content with the eventual objective of determining clinically relevant themes that encourage adolescent

girls to verbalize their thoughts in a beneficial manner by facilitating the use of cognitive words and of the first person singular. As mentioned previously, past studies have suggested that the more frequent use of both emotional and cognitive words as well as the use of the first person singular could increase adjustment by decreasing anxiety and decreasing internalization symptoms (Joncas & O'Neill-Gilbert, 2004a, 2004b; Muris, Meesters, & Gobel, 2002; Reynolds et al., 2000). Certain forms of disclosure seem to benefit young girls, and prompting the discussion of specific topics may facilitate emotional expression. Therefore, in order to determine which questions (positive or negative occurrences, academic or social circumstances) evoked the most frequent use of affective and cognitive words and the use of the first person singular, the journals were analyzed using the LIWC program.

Table 1 and Table 2 show the percentage of words used in response to structured journal questions in Emotional and Descriptive journals respectively. Questions encouraged participants to discuss academic concerns (e.g., Write about your thoughts and feelings on the day before coming to high school for the first time), or social concerns (e.g., Write about your thoughts and feelings on the possibility of meeting new people or making new friends at the beginning of the school year.). For the participants in the Emotional journal condition, positive events (e.g., write about something that put you in a good mood this week.), and negative events (e.g., write about something that put you in a bad mood this week.) were asked. For participants in the Descriptive journal condition, a description of the activities they engaged in at nights and on the weekends as well as a detailed description of their after school activities were asked.

Affective words. When the instructions encouraged participants to write about their thoughts and feelings (Emotional journal), structured questions about positive events were most likely to elicit affective words although discussing academic and negative events also elicited affect. Conversely questions pertaining to social concerns seemed to evoke less affective discourse. Additionally, when participants were asked to answer the structured questions by listing and describing (Descriptive journal), questions about academic concerns were most likely to elicit emotional words, $F(1,116) = 11.8, p < .001$. Questions describing what activities they engaged in on the weekends also elicited a significantly greater frequency of emotional words. Questions that specifically addressed social concerns and after-school activities elicited the least number of affective words. Regardless of whether asking a descriptive-type question or an emotional-type question, results seem to suggest that broaching social topics would not encourage emotional disclosure. Although the analysis does not clarify why this is so, perhaps these young adolescents are too preoccupied with their own self-perception and attribute little emotional discourse to their peers. It could be verified whether journal entries relating to social concerns were generally written in a descriptive and less cognitive and emotional manner which could then explain the results.

Cognitive Words. Participants in the emotional journal condition used cognitive words most when discussing academic and social concerns. Questions that specifically enquired about positive or negative aspects of the day tended to elicit fewer cognitive words. Perhaps both academic and social concerns require a higher degree of understanding while positive and negative aspects emphasize more emotional processes. However, cognitive words were elicited equally from participants in the Descriptive

journal condition, regardless of the structured question that was posed. Perhaps when situations are described they require the same amount of cognitive understanding, therefore the type of question asked would have little effect on the frequency of cognitive words. Pertinent questions could therefore include mentioning more academic and social concerns when asking emotion-type questions such as the ones found in the Emotional journals.

First Person Singular. For the participants in the Emotional journal condition, questions pertaining to negative events seemed to elicit the least use of the first person singular while social questions elicited the most. For the participants asked to list and describe their activities, structured questions pertaining to social concerns, and activities completed on weekends were most likely to encourage the use of the first person singular, $F(1,116) = 20.98, p < .001$. Questions pertaining to academic concerns were associated with a lower frequency of usage for the first person singular. Therefore, in order to encourage the use of the first person singular, questions oriented towards social concerns could be used. In the Descriptive journal conditions, participants seemed use more emotional words when addressing academic concerns but use the first person singular more often when discussing social situations. As mentioned previously by Joncas and O'Neill-Gilbert, 2004b, the significance of using the first person singular may be an indication of the efforts made to establish an identity. Specifically, as young adolescents try to confront their cognitions rather than inhibit them, they would try to explain others' behaviours as thoughts similar to their own, thus use of the word "I". In this case, one could hypothesise that participants may be inhibiting cognitions regarding academic concerns, thereby not utilising the first person singular. Furthermore, the

higher frequency of cognitive words when responding to a question referring to social concerns in addition to the higher frequency of the use of the first person singular, supports the premise that for young adolescents the use of "I" is an intermediary step towards cognitive restructuring.

Conclusion

The goal of the first part of the study was to determine the themes spontaneously revealed by young adolescent girls in order to establish their current concerns. Analysis revealed that journal content consisted of standard linguistic dimensions, psychological processes, as well as personal concerns. The Personal concerns category revealed the participants current preoccupations. The most frequently mentioned subjects within the personal concerns category were school, home, achievement, and bodily preoccupations. The link between the mention of school and the high frequency of emotional and cognitive words associated with this subject may explain why participants tended to spontaneously discuss school most often.

The differences between the Emotional and Descriptive journal condition seem to indicate that different psychological mechanisms predominate when answering from a descriptive point of view or an emotional point of view. Therapists asking questions in order to facilitate the expression of either affective or cognitive words could keep these differences in mind.

Given that certain questions seem to elicit more affective words while others tend to elicit the first person singular or more cognitive words, a carefully planned series of questions especially focusing on both academic and social questions could be used clinically. Furthermore, depending on whether a young adolescent tends to express

him/her-self less using affective or cognitive and the first person singular, a clinician can ask specific questions that will encourage their client to use more of the desired words, thus enhancing their coping. For example, a client who normally would speak or write about their actions in an indirect manner (i.e., "you wouldn't feel bad…") could be encouraged to verbalise in a direct manner (i.e., "I would not feel bad…").

It is important to note that the themes spontaneously provided in this naturalistic setting differed from other studies like Carr and Schmidt (1994) who used an anonymous questionnaire to survey eight graders' concerns, and Boehm et al., (1998) who surveyed calls by young teens to telephone help lines, in that participants were never specifically asked what interested them. Themes in this study therefore indicate what young adolescent girls will spontaneously write in their journals but not necessarily what they will confide in others. In the above-mentioned studies the concerns confided in others consisted of peer relationships, sexuality, family problems, self-esteem, drugs and alcohol (Boehm et al., 1998) and good grades, parent's health, friends or family members dying, taking tests, not being attractive, going to high school, dying and getting AIDS (Carr & Schmidt, 1994). Regardless of the context, some commonalities in the personal concerns category such as "occupation" (including going to high school, good grades, and taking tests), "physical states and functions" (including attractiveness, and sexuality) and "metaphysical concerns" (including parents health, friends or family members dying, dying) were found indicating the parallel between what young adolescents will disclose (reveal) to others and what they will disclose (reveal) within a journal (to themselves).

Equally, one must consider the generalizability of this study. Knowing that girls tend to demonstrate and report a greater amount of internalization that do boys, and taking into account that internalization scores tend to decrease when girls write emotional journals, one might expect to see a floor effect for boys demonstrating that journal writing is less useful for decreasing internalisation than for girls. Considering the clinical recommendations, it may also be less pertinent to modify, at least in the same manner the clinical discourse used in therapy for boys. Conversely, perhaps boys who need to consult a therapist may have a significant level of internalizing behaviours and may in fact benefit in the same way that girls would. Future studies should therefore evaluate the impact of not only journal writing, but also emotional expression for boys. Similarly, because only young adolescent girls participated in the study, and given the great developmental changes which occur during adolescence, and given the differences between boys and girls, findings probably would have varied by sex and for different age groups. Hence, future studies should attempt to analyse the disclosure of various age groups of boys and girls to specifically determine structured questions that would encourage beneficial disclosure.

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Table 1.

Percentage of words used in emotional journals when discussing specific questions

	Emotional Journals			
	Questions asked			
Written word categories	Academic	Negative	Positive	Social
Social processes	29.4[a]	23.8[b]	24.1[bc]	15.0[d]
Cognitive mechanism	18.0[ab]	17.0[bc]	17.3[b]	21.8[a]
Affect	18.4[ab]	21.4[ab]	21.8[a]	17.4[b]
Occupation	6.7[a]	5.1[a]	4.7[a]	12.8[b]
Leisure activities	1.2[a]	4.2[b]	2.9[ab]	1.1[a]
Physical Concerns	1.0[a]	1.8[ab]	1.9[b]	0.9[a]
First person	25.3[ab]	26.7[a]	27.4[ab]	31.1[b]

Note. For each individual variable, different letters indicate significant differences.

Table 2. Percentage of words used in descriptive journals when discussing specific questions

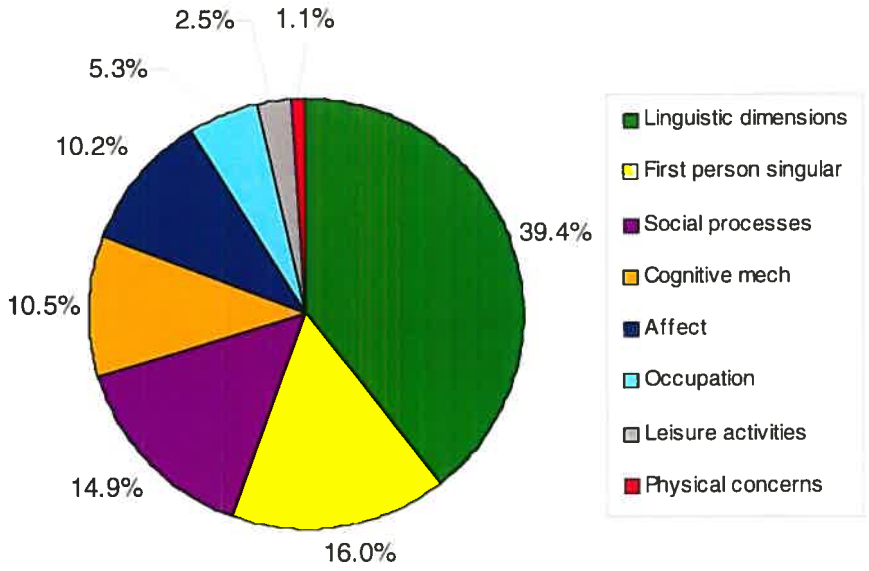
	Descriptive Journals			
	Questions asked			
Written word categories	Academic	Weekend	After School	Social
Social processes	34.5[a]	27.6[b]	22.4[b]	19.5[c]
Cognitive mechanism	17.1[a]	13.9[a]	13.4[a]	19.9[a]
Affect	17.5[a]	14.6[ab]	11.0[bcd]	11.3[d]
Occupation	11.3[a]	6.0[b]	8.9[b]	17.2[c]
Leisure activities	1.5[a]	9.4[b]	11.6[bc]	2.3[a]
Physical Concerns	1.2[a]	2.5[bc]	4.3[ac]	1.4[b]
First person	16.9[a]	26.1[bcd]	28.4[c]	28.5[d]

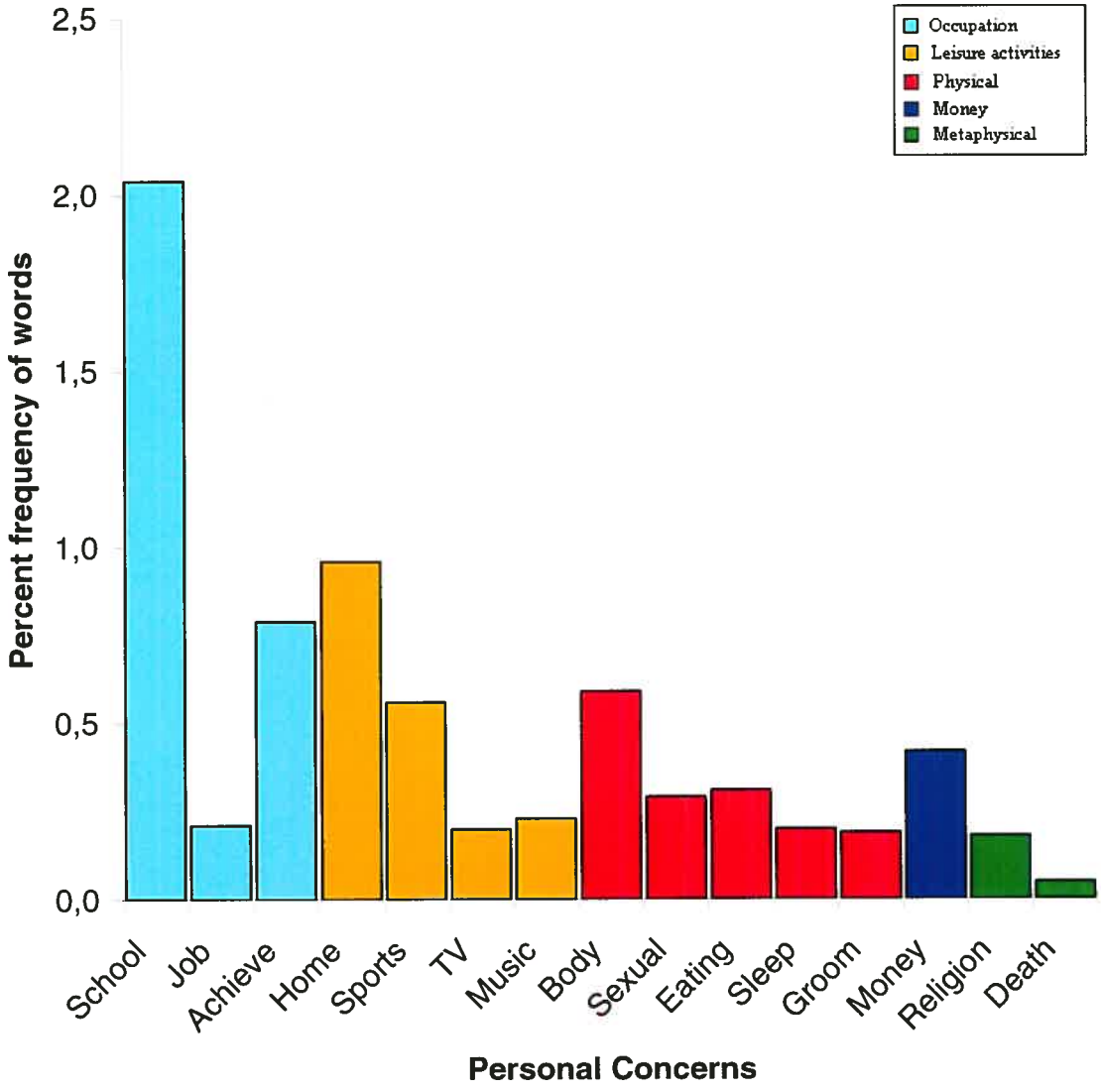
Note. For each individual variable, different letters indicate significant differences.

Figure Captions

Figure 1. Percentage of words used in each category (excluding standard linguistic dimensions) regardless of question

Figure 2. Percent frequency of Personal Concerns by category


2.5%
1.1%
5.3%
10.2%
39.4%
10.5%
14.9%
16.0%
Linguistic dimensions
First person singular
Social processes
Cognitive mech
Affect
Occupation
Leisure activities
Physical concerns


Occupation
Leisure activities
Physical
Money
Metaphysical
2,5
2,0
1,5
1,0
0,5
0,0
Percent frequency of words
School
Job
Achieve
Home
Sports
TV
Music
Body
Sexual
Eating
Sleep
Groom
Money
Religion
Death
Personal Concerns

Conclusion

Conclusion

This thesis aspired to evaluate four main questions. First, whether disclosure in the form of structured journal writing for young adolescent girls might have comparable, beneficial psychological effects similar to interventions for adults. The second was whether changes in psychological well-being (anxiety, internalizing and externalizing symptoms) differed in the writing and control groups over time. In light of the results, some explanatory models were examined as they apply to adjustment in young adolescents. These themes were elaborated in order to determine journal writing's efficacy as a therapeutic tool for young adolescents.

The first article sought to attain these goals by investigating the efficacy of journal writing on State and Trait anxiety for young adolescents, specifically twelve and thirteen-year-old girls. Furthermore, it explored the Inhibition-Confrontation model, which included the notion of cognitive change, and examined alternative explanatory models that would account for the results such as the Avoidance/ Exposure model. This was brought about by noting self-reported anxiety levels throughout the various experimental conditions before and after the experiment. Correlations between the level of anxiety and the different words used were also examined for support of the explanatory models.

Results indicated that both the experimental groups and the control group showed a significant change in adjustment from pre to post (within subjects) measures on all scales, demonstrated by a main effect for the pre and post condition. Post hoc analysis however indicated that both the experimental groups showed an increase in adjustment while the control group showed a decrease. There was also a significant difference in

measures between group conditions demonstrated by a main effect. For State anxiety, both experimental groups showed significant decreases in scores, for Trait anxiety, there was a significant difference between the Emotional journal group and the control group but not for the Descriptive journal group. Table 1 summarises the results.

Table 1

Summary of Post STAIC State and Trait Anxiety Scores

State Anxiety				Trait Anxiety		
Emotional	=	Descriptive		Emotional	<	Control
Descriptive	=	Emotional		Descriptive	=	Emotional
Control	≠ >	Emotional and Descriptive		Control	=	Descriptive

Article 1 therefore proposes that the Descriptive group's significant change could be explained in part by the fact that describing an anxiety provoking situation may be a form of exposure and habituation. Furthermore, the results suggest that journal writing is associated with a greater decrease in State Anxiety than with Trait Anxiety. This coincides with the expectation that the State Anxiety construct is more easily changed than the Trait anxiety construct. A suggestion for the application of the Inhibition-Confrontation Model for young adolescents could be to reformulate it so as to

take into consideration the effects of exposure and desensitization on anxiety because describing a situation, in itself, appears to be therapeutic.

The second article also evaluated the pertinence of the Inhibition-Confrontation model when applied to young adolescent girls. It investigated the efficacy of journal writing on internalizing and externalizing behaviours for 12- and 13- year-old girls by noting self-reported internalization and externalization levels among the various experimental conditions before and after the experiment. Correlations between the pre and post YSR scores and the different words used were also examined.

Results for the internalizing scales mirrored those found for adults in similar studies. That is, that the participants in the Emotional journal writing condition demonstrated a significant decrease in internalizing scores when compared to the Descriptive journal condition and the Control condition, which showed no significant changes. Specifically, the participants who wrote about their emotions showed better adjustment than those who described their day and inhibited their emotions. These results are similar to Suls, & Fletcher (1985) who also found that participants using attentional (confrontative) strategies to cope rather than distraction strategies (inhibitions) reported less depression.

The Inhibition-Confrontation theory therefore predicted the results and could be applied in relation to coping. Externalization scores, however, remained relatively unchanged hinting, as with the concept of anxiety that the Inhibition-Confrontation theory, does not span indiscriminately across all dimensions. Table 2 summarises the results for externalization and internalization scores.

Table 2

Summary of Post YSR Scores

Internalization				Externalization		
Emotional	<	Descriptive		Emotional	=	Control
Descriptive	=	Control		Descriptive	=	Emotional
Control and Descriptive	>	Emotional		Control	=	Descriptive

Results for both article one and two allow for several conclusions: First and most importantly, that writing about emotions does helps decrease anxiety and internalizing symptoms for young girls. Furthermore, that descriptive writing helps decrease State anxiety for young girls.

Interestingly enough, correlations between the frequency of both certain words and categories of words and the decrease in anxiety scores were found. Although the design and scope of the thesis did not permit a thorough investigation of the phenomena, it was suggested that these correlations, not present in the adult literature may be evidence of a transitional step present in young adolescents in order to achieve cognitive restructuring.

It can also be suggested that the Inhibition-Confrontation Model could be refined for adolescents so as to take into consideration the theoretical differences for anxiety and externalization. This would then allow for the effects of exposure and desensitization on anxiety. Additionally, the theory could allow for a developmental perspective taking

into account how developmental levels at varying ages could affect the degree to which the Inhibition-Confrontation theory applies.

Lastly, a parallel can be made with Dispositional and Situational coping and State and Trait anxiety. Dispositional coping refers to a general style of coping used across situations whereas situational coping refers to an individual's response to a specific situation. Although this thesis did not address these issues, it would be interesting to evaluate whether the differences found for State and Trait anxiety are also apparent for Dispositional and Situational coping, thus allowing a clearer understanding of how journal writing works. Also, if dispositional coping were shown to be affected or changed by journal writing, journaling would prove to be a polyvalent therapeutic tool for long-term change.

The fourth question touched upon by this thesis consists of the fact that, because very few studies have used journals as a therapeutic tool, it would be useful and pertinent to detail journal content. The journal content revealed that although the participants completed the assigned task within a classroom setting, they were able to disclose a significant amount of emotional and descriptive content. Although no causal links are made given the correlational and descriptive nature of the findings, suggestions were made regarding the encouragement of using certain words during therapeutic interventions.

Limitations

One apparent limitation of the study concerns the control group. Initial journal studies included only a non-emotional or a descriptive control group. The differences

between the experimental and control group in those studies could not be entirely attributed to emotional journal writing because the effect of descriptive writing was not assessed. This study added a non-randomized, non-writing control group. Methodological limitations linked to the group administration of the journals made it impossible to include a randomized control group similar to the emotional and descriptive journal writing groups. Indeed, had the girls randomly been assigned to a control group while others in that same class wrote journals, the participants in one condition or the other may have been jealous of either the participants who wrote journals, or the lightened course work of those in the control group. Had this been avoided and randomization been successfully applied, it would have been possible to eliminate all external events as a cause for the increases in STAIC and YSR scores. While it is possible that external events may have influenced the control group differently than the experimental groups, it is important to note that all three classes participating in the study including the control group (which consisted of one of the classes) had the same teachers, and followed the same curricula. The participants in the control group differed procedurally only in that rather than writing in the journals, they did more in-class reading with their teacher while this reading was assigned as homework for the two groups where the participants wrote randomly in either the emotional journals or the descriptive journals. We therefore believe it unlikely that the class used as a control group could have been impacted by such external events.

This study differed from the adult studies in that the journal writing occurred in groups rather than on an individual basis. While the journal content indicated that the participants did in fact reveal personal details, the individual administration may tend to

elicit a tendency towards more, or stronger cognitive processes possibly responsible for better adjustment. Conversely, a group effect encouraging journaling behaviour may have also occurred, increasing the likelihood that any given participant will write in her journal.

Furthermore, the dependent measures used in this study relied upon self-report. Adult studies often used physiological measures and small changes in these measures may be more readily apparent than the subjective self-report measures. It is possible, therefore, that the writing conditions may have had an impact on factors such as physiological measures that were not measured in this study.

The population and methodology used for this study provided many advantages with regards to the control of individual differences. For instance, the girls were from similar SES, very few girls were from single-parent families (3%), they came from the same school, they shared the same teachers, etc.... However, writing ability could have influenced the results. While efforts were made to screen out participants who would have had too much difficulty in completing either an emotional or a descriptive journal (one student was excluded from the study for this reason), written texts by the young adolescents were necessarily shorter than the texts produced by their adult counterparts. One can question the impact of such a limitation on the results. The full potential impact of disclosure has yet to be assessed.

Although it can be argued that using a healthy population of young adolescents could influence the results in that there may be a floor effect (already low anxiety scores may not have been significantly reduced in spite of the intervention), the data indicates that the participants did in fact experience some level of stress as indicated by their

scores on both the YSR and the STAIC. Furthermore, excerpts form journals discussing arguments with friends and parents, and emotional subjects such as illness of a pet or one's own illness were discussed further supporting the fact that while the participants were from a healthy population, they did experience a significant amount of stress.

Many of the analyses done for this thesis, aside from measuring the efficacy of emotional journal writing were correlational in nature, allowing for support of specific theories for confirmation or disconfirmation of theories. To determine exactly how cognitive, emotional or behavioural mechanisms work to contribute to psychological adjustment during emotional or descriptive disclosure in order to better understand these concepts is essential in order to perfect this technique.

Further Studies

In addition to the suggestions made in the previous articles and discussions for future studies, certain topics should be explored in future research. The methodology of the study allowed for the control of factors such as individual differences, age, gender, etc., however, it did not allow for the evaluation of each variable.

Because the study explored the effects of journal writing for only a limited age range, limited conclusions with regards to the generalization of the findings and the developmental appropriateness of the theory could not be made. Future studies that would encompass a wider range, could co-vary out the age variable, which would allow for a clearer understanding of how journal writing works. Similarly, the fact that the participants in this study were all females might have influenced the results in that, as mentioned previously, girls tend report a higher degree of internalization compared to

boys. One might expect to find that journal writing on the part of boys may therefore be less efficacious than for girls.

Considering the fact that different clinical concepts (e.g., anxiety, internalization, externalization) seem to be affected differently by journal writing, the effect of journaling on various clinical disorders such as Anxiety Disorders and Eating Disorders should be assessed in order to determine the appropriateness of such an intervention. Similarly, individual differences such as personality traits should be explored. For example, it would be interesting to see if anxious girls benefit more from journals than girls less prone to anxiety.

Given that the journals were completed in a classroom setting, and that journaling may take place in various contexts such as at home or during the course of a therapy, it is important to evaluate the impact of changing environments on the efficacy of the journaling technique. This would provide information as to the most optimal and feasible way of implementing the technique. For instance, as a preventative measure in schools, children could be taught to journal regularly in the hopes of developing effective coping skills.

Certain moderator variables may also influence how much journal writing can help an individual. For instance, it would be interesting to assess the impact of social support. Would an adolescent with adequate social support benefit as much from journal writing as one with little or no support? Furthermore would the source of social support (parents and siblings vs. friends) influence the outcome? What role did family socialization play in encouraging the tendency towards self-disclosure by young adolescents?

Girls who had previously written journals may have benefited less given that they may have continually and progressively have been confronting the stressful situations as they occurred. If this had been the case, the effect size may have been diminished by this fact. However, they may also have benefited more because they may not have previously confronted the specific issues raised in the journals written in class but may have been accustomed to writing and therefore a practice effect may have occurred, thus overestimating the effect of journal writing for the study. Future studies could control for pre-existing journaling. Other studies could also evaluate the long term impact of journaling.

Quantity of writing should also be assessed. Do people who write more about emotions feel better? Is there an optimal amount of writing? Similarly, each girl's writing ability was not individually assessed. The teachers were initially asked to indicate to the researchers which participants might have difficulty in completing the task. Although only one participant was eliminated from the study for this reason, it would be important to assess the impact of writing abilities. Furthermore, because this research touches many different areas, an effort to integrate theories from various theoretical bases, such as clinical psychology, social psychology, personality, learning, and health psychology should be made.

Caveats

The introduction of journaling should be approached in clinical populations with a degree of caution. Specifically, the risk of inducing short-term distress should militate against a rush to utilise written emotional expression as a self-help therapeutic tool.

Moreover van Hezewijk and Panhuysen (1999) have proposed that confrontation with one's traumatic experiences in writing may have inherent risks. They theorized that adverse effects could be a function of cognitive biases associated with high anxiety and depression inherent in participants.

Challenges posed by the topic and population.

The theories presented and explored in this thesis constitute only a small sampling of the many theoretical concepts touched by the topic. Disclosure can be studied from many viewpoints including patient-therapist disclosure, personality characteristics of those who chose to self-disclose, its benefits and drawbacks, its relation implications, and its impact on physical and psychological health. Also touched by this theory are stress, coping, adolescence, sex differences, externalization, anxiety, depression and other internalizing symptoms, etc.... This field of exploration is in its beginnings. Several specific concepts and theories merit exploration in order to contribute more knowledge. Specifically, narrative theory, which provides meaning to emotional expression as an explanation to the results and is closely linked to disclosure, should be examined in order to achieve a rapprochement between the theories presented and the data which is emerging from journaling studies. Alternative explanations could also be explored: For instance, although other studies suggest that cognitive processes, such as reduced thought intrusions and improved working memory, may be the mediating processes (e.g., Klein & Boals (2001)), it is also possible that writing-induced interpersonal and behavioural changes, such as reducing interpersonal conflicts and

distractions or structuring one's time better, lead to improved academic performance. Future studies should therefore examine such potential pathways.

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physiological responses to stress. *Journal of Abnormal Psychology, 88*(4), 369-380.

Appendices

Appendix A

Information to the parent about the study

Information to the parent about the study

Dear Parent/Guardian:

The purpose of this letter is to inform you of the opportunity for you and your child to participate in a study for a doctoral thesis currently taking place at the Université de Montréal. As a part of classroom activities, children are often required to keep journals as a writing exercise. As you know, the beginning of high school is a period where your child must adjust to many new changes. We believe that journal writing may help accelerate adjustment to new situations. This study is designed to investigate journal writing as a tool for children's adjustment to new events.

In this study, the children will be given special instructions as to what to write in their journals, three times a week for twenty minutes, over a one month span during class time. Children will be asked to write about their thoughts, feelings and activities throughout the week. Each child will be assessed before and after the study with a questionnaire filled out by yourself (about 20 minutes), and questionnaires for your child.

You and your child's responses, as well as your child's journal will be kept confidential, all identifying information will be removed and all findings will be reported in terms of groups of children only. Children not participating in the study will also write journals as a writing exercise but will not receive special instructions and will not be monitored. Children may withdraw from the study at any time.

Please have you and your child fill out the attached form to let us know whether you are willing to participate or not and have your child return it to her school. Should you have any questions about the study at this time, please do not hesitate to contact Jasmine Joncas at XXX-XXXX.
Your child's participation in this study will be greatly appreciated.

Yours sincerely,

Jasmine Joncas
Ph.D. candidate

Appendix B

Parent's and participant's consent forms

Parent's and participant's consent forms

☐ I agree to let my child (name)_____ participate in the study on the effects of journal writing. I also agree to fill out a brief questionnaire about my child before and after the study. I realise that my child's responses will be kept completely confidential and he or she may withdraw from the study at any time.

☐ I do not agree to let my child (name)_____ participate in the study on the effects of journal writing. I understand that as a part of normal classroom activities, she will write a journal as a writing exercise but that she will not receive special instructions nor will she be monitored.

SIGNED_____ SIGNED_____
Signature of participating child Signature of parent or guardian

Please complete the following so that we are able to contact you during the study and after the study is completed. You will receive the questionnaire as well as instructions as to how to fill it out from your child once she has received her journal.

Our address and phone # is:

Address: _____

_____

_____

Phone #s: (Home) _____

(Office)_____

E-Mail _____

Appendix C

Detailed protocol for the meetings with each participant (STAIC study)

Protocol for the First Meeting with a Participant

The experimenter meets with a child in a quiet room and says the following:

«Hi, my name is (experimenter) and you are (student's name). As you know, you are going to participate in a study. What we will do today is fill out some questionnaires and then I will show you how to use your journal. »

« I want you to remember that everything you say and write and all the questionnaires are confidential. That means that what you say stays between you and me. Your name won't be on any of the sheets, so no one will know that it's you that wrote. Do you have any questions to ask me about what I just said? »

The experimenter answers any questions then continues:

« Now, we will fill out some questionnaires. »

The experimenter administers the following questionnaires according to their standard administrations:

- State Trait Anxiety Inventory for Children (STAIC)

When all the questionnaires are filled out the experimenter continues:

« You did that very well. Now we've finished the questionnaires, I will show you your journal. Here is your journal. On the first page there are general instructions.
Let's go over them together. »

The experimenter reads the instructions to either the emotional or descriptive journal included in each journal.

« Remember, you will take your name off your journal before you hand it in so we won't know what you write in the journal. Do you have any questions about what we have just said? »

The experimenter answers any questions then continues:

« On Mondays, Wednesdays and Fridays, your teachers will give you twenty minutes to write in this journal. Your friends will also have a journal and they may have different instructions than you. That's why it's really important for you to follow the instructions written in *your* journal. Unless you want to write in your journal that night you should keep it locked in your book locker. Now, let's look at the instructions on each page. »

The experimenter reads the instructions out loud with the participant.

For emotional journals, the experimenter says, « Now be sure to write about what you feel inside you and your emotions. »

For descriptive journals, the experimenter says, « Now be sure to include as many details as you can. »

The experimenter continues:

« It's really important that these be filled out regularly. Do you have any questions about what you have to do? »

The experimenter answers any questions then continues:

« Now, here is a questionnaire for your parents to fill out. Make sure you bring this back in a sealed envelope and give it to your teacher by next (due date). »

Protocol for the Second Meeting with the Participant

The experimenter greets the participant and says:

« I'd like to start today by filling out some questionnaires like last time. Let's start with this one. »

The experimenter administers the following questionnaires according to their standard administrations:

- STAIC

The experimenter says:

« You did that very well. Now I'd like you to take your journal and remove the page with your name on it and then give me the journal. Here is a questionnaire for your parents to fill out. Make sure you bring it back to your teachers in a sealed envelope and give it by (due date) » After I finish talking to all of the students, I will go into your class and explain exactly what we did and what we hope to find out. »

Appendix D

Detailed protocol for the meetings with each participant (YSR study)

Protocol for the First Meeting with a Participant

The experimenter meets with a child in a quiet room and says the following:

«Hi, my name is (experimenter) and you are (student's name). As you know, you are going to participate in a study. What we will do today is fill out some questionnaires and then I will show you how to use your journal. »

« I want you to remember that everything you say and write and all the questionnaires are confidential. That means that what you say stays between you and me. Your name won't be on any of the sheets, so no one will know that it's you that wrote. Do you have any questions to ask me about what I just said? »

The experimenter answers any questions then continues:

« Now, we will fill out some questionnaires. »

The experimenter administers the following questionnaires according to their standard administrations:

- Youth Self-Report (YSR)

When all the questionnaires are filled out the experimenter continues:

« You did that very well. Now we've finished the questionnaires, I will show you your journal. Here is your journal. On the first page there are general instructions.
Let's go over them together. »

The experimenter reads the instructions to either the emotional or descriptive journal included in each journal.

« Remember, you will take your name off your journal before you hand it in so we won't know what you write in the journal. Do you have any questions about what we have just said? »

The experimenter answers any questions then continues:

« On Mondays, Wednesdays and Fridays, your teachers will give you twenty minutes to write in this journal. Your friends will also have a journal and they may have different instructions than you. That's why it's really important for you to follow the instructions written in *your* journal. Unless you want to write in your journal that night you should keep it locked in your book locker. Now, let's look at the instructions on each page. »

The experimenter reads the instructions out loud with the participant.

For emotional journals, the experimenter says, « Now be sure to write about what you feel inside you and your emotions. »

For descriptive journals, the experimenter says, « Now be sure to include as many details as you can. »

The experimenter continues:

« It's really important that these be filled out regularly. Do you have any questions about what you have to do? »

The experimenter answers any questions then continues:

« Now, here is a questionnaire for your parents to fill out. Make sure you bring this back in a sealed envelope and give it to your teacher by next (due date). »

Protocol for the Second Meeting with the Participant

The experimenter greets the participant and says:

« I'd like to start today by filling out some questionnaires like last time. Let's start with this one. »

The experimenter administers the following questionnaires according to their standard administrations:

- YSR

The experimenter says:

« You did that very well. Now I'd like you to take your journal and remove the page with your name on it and then give me the journal. Here is a questionnaire for your parents to fill out. Make sure you bring it back to your teachers in a sealed envelope and give it by (due date) » After I finish talking to all of the students, I will go into your class and explain exactly what we did and what we hope to find out. »

Appendix E

Instructions for the teachers participating in the experiment

Teacher's Instructions

First, I wish to thank you for your help. During the experiment, if you or the students have any questions, please do not hesitate to call me. Here are a few instructions to keep in mind throughout the study.

Please inform me if you believe that any of your students do not have the skills necessary to complete this study.

Remind the participants that what they write in their journals is confidential and that you will not read the journals.

Allow 20 minutes for journal writing during each session.

Do not circulate in the aisle while the students are writing.

Don't collect the journals.

Remind the students to read each daily question carefully.

Take note of the days when your students do the journals.

Call me after the second time the students have completed the journals, we will review the procedure and discuss any difficulties.

Call me when all journal entries are completed. We will set a date so that I can administer the last questionnaires.

Appendix F

List of the instructions found in the Emotional journals

List of the instructions found in the Emotional journals

Journal Entry 1:

Often, people look forward to or worry about new situations like their first day at high school.

Write about your thoughts and feelings on the day before coming to high school for the first time. Discuss any emotions you may have felt at the time.

Journal Entry 2:

Write about something that put you in a good mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 3:

Write about something that put you in a bad mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 4:

Write about your thoughts and feelings on your way to, and during your first day of high school and how you felt at the end of the day. How do you feel about being in high school now? Discuss any emotions you felt then and now.

Journal Entry 5:

Write about something that put you in a bad mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 6:

Write about something that put you in a good mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 7:

Sometimes people look forward to or worry about meeting new people.
Write about the thoughts and feelings on the possibility of meeting many new people and making new friends at the beginning of the year. Discuss any emotions you may have felt at the time.

Journal Entry 8:

Write about something that put you in a bad mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 9:

Write about something that put you in a good mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 10:

Last time you wrote about your thoughts and feelings about making friends and the beginning of the year. Write about your thoughts and feelings on how you feel now. Discuss any emotions you have now.

Journal Entry 11:

Write about something that put you in a bad mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Journal Entry 12:

Write about something that put you in a good mood in the past week. Be sure to write about how you felt before the event and after. Discuss any emotions you have now.

Appendix G

List of the instructions found in the Descriptive journals

List of the instructions found in the Descriptive journals

Journal Entry 1:

Often, people see many new things in new situations like their first day at high school. List and describe some of the new things that you saw on your first day of high school. Be sure to include as many details as you remember.

Journal Entry 2:

List and describe some of the new things that you had to buy for your first day of high school. Be sure to include as many details as you remember.

Journal Entry 3:

Sometimes when we meet new people we notice some interesting characteristics like how tall a person is or the colour of their eyes. List and describe two or three students you noticed on your first day of school. Be sure to include as many details as you remember.

Journal Entry 4:

List and describe two or three of your teachers. You can describe the way they act or the way they feel. Be sure to include as many details as you remember.

Journal Entry 5:

List and describe one activity you did this week or on the weekend. Be sure to include as many details as you remember.

Journal Entry 6:

List and describe one activity you did this week or on the weekend. Be sure to include as many details as you remember.

Journal Entry 7:

List and describe one activity you did this week or on the weekend. Be sure to include as many details as you remember.

Journal Entry 8:

List and describe one activity you did this week or on the weekend. Be sure to include as many details as you remember.

Journal Entry 9:

List and describe what you usually do on weekdays when you get home from school. Be sure to include as many details as you remember.

Journal Entry 10:

List and describe what you usually do on weekdays when you get home from school. Be sure to include as many details as you remember.

Journal Entry 11:

List and describe what you usually do on weekdays when you get home from school. Be sure to include as many details as you remember.

Journal Entry 12:

List and describe what you usually do on weekdays when you get home from school. Be sure to include as many details as you remember.

Appendix H

STAIC

(State and Trait respectively)

HOW-I-FEEL QUESTIONNAIRE

Developed by C. D. Spielberger, C. D. Edwards, J. Montuori and R. Lushene

STAIC FORM C-1

NAME _____ AGE _____ DATE _____

DIRECTIONS: A number of statements which boys and girls use to describe themselves are given below. Read each statement carefully and decide how you feel *right now*. Then put an X in the box in front of the word or phrase which best describes how you feel. There are no right or wrong answers. Do not spend too much time on any one statement. Remember, find the word or phrase which best describes how you feel right now, *at this very moment.*

1.	I feel	☐	very calm	☐	calm	☐	not calm
2.	I feel	☐	very upset	☐	upset	☐	not upset
3.	I feel	☐	very pleasant	☐	pleasant	☐	not pleasant
4.	I feel	☐	very nervous	☐	nervous	☐	not nervous
5.	I feel	☐	very jittery	☐	jittery	☐	not jittery
6.	I feel	☐	very rested	☐	rested	☐	not rested
7.	I feel	☐	very scared	☐	scared	☐	not scared
8.	I feel	☐	very relaxed	☐	relaxed	☐	not relaxed
9.	I feel	☐	very worried	☐	worried	☐	not worried
10.	I feel	☐	very satisfied	☐	satisfied	☐	not satisfied
11.	I feel	☐	very frightened	☐	frightened	☐	not frightened
12.	I feel	☐	very happy	☐	happy	☐	not happy
13.	I feel	☐	very sure	☐	sure	☐	not sure
14.	I feel	☐	very good	☐	good	☐	not good
15.	I feel	☐	very troubled	☐	troubled	☐	not troubled
16.	I feel	☐	very bothered	☐	bothered	☐	not bothered
17.	I feel	☐	very nice	☐	nice	☐	not nice
18.	I feel	☐	very terrified	☐	terrified	☐	not terrified
19.	I feel	☐	very mixed-up	☐	mixed-up	☐	not mixed-up
20.	I feel	☐	very cheerful	☐	cheerful	☐	not cheerful

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HOW-I-FEEL QUESTIONNAIRE

STAIC FORM C-2

NAME _____ AGE _____ DATE _____

DIRECTIONS: A number of statements which boys and girls use to describe themselves are given below. Read each statement and decide if it is *hardly-ever*, or *sometimes*, or *often* true for you. Then for each statement, put an X in the box in front of the word that seems to describe you best. There are no right or wrong answers. Do not spend too much time on any one statement. Remember, choose the word which seems to describe how you usually feel.

1.	I worry about making mistakes	☐	hardly-ever	☐	sometimes	☐ often
2.	I feel like crying	☐	hardly-ever	☐	sometimes	☐ often
3.	I feel unhappy	☐	hardly-ever	☐	sometimes	☐ often
4.	I have trouble making up my mind . . .	☐	hardly-ever	☐	sometimes	☐ often
5.	It is difficult for me to face my problems .	☐	hardly-ever	☐	sometimes	☐ often
6.	I worry too much	☐	hardly-ever	☐	sometimes	☐ often
7.	I get upset at home	☐	hardly-ever	☐	sometimes	☐ often
8.	I am shy	☐	hardly-ever	☐	sometimes	☐ often
9.	I feel troubled	☐	hardly-ever	☐	sometimes	☐ often
10.	Unimportant thoughts run through my mind and bother me	☐	hardly-ever	☐	sometimes	☐ often
11.	I worry about school	☐	hardly-ever	☐	sometimes	☐ often
12.	I have trouble deciding what to do . . .	☐	hardly-ever	☐	sometimes	☐ often
13.	I notice my heart beats fast	☐	hardly-ever	☐	sometimes	☐ often
14.	I am secretly afraid	☐	hardly-ever	☐	sometimes	☐ often
15.	I worry about my parents	☐	hardly-ever	☐	sometimes	☐ often
16.	My hands get sweaty	☐	hardly-ever	☐	sometimes	☐ often
17.	I worry about things that may happen . .	☐	hardly-ever	☐	sometimes	☐ often
18.	It is hard for me to fall asleep at night .	☐	hardly-ever	☐	sometimes	☐ often
19.	I get a funny feeling in my stomach . . .	☐	hardly-ever	☐	sometimes	☐ often
20.	I worry about what others think of me .	☐	hardly-ever	☐	sometimes	☐ often

Appendix I

YSR

Below is a list of items that describe kids. For each item that describes you **now** or **within the past 6 months**, please circle the 2 if the item is **very true** or **often true** of you. Circle the 1 if the item is **somewhat** or **sometimes true** of you. If the item is **not true** of you, circle the 0.

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 1. I act too young for my age
0 1 2 2. I have an allergy (describe): _____
_____
_____
0 1 2 3. I argue a lot
0 1 2 4. I have asthma
0 1 2 5. I act like the opposite sex
0 1 2 6. I like animals
0 1 2 7. I brag
0 1 2 8. I have trouble concentrating or paying attention
0 1 2 9. I can't get my mind off certain thoughts (describe): _____
_____
_____
0 1 2 10. I have trouble sitting still
0 1 2 11. I'm too dependent on adults
0 1 2 12. I feel lonely
0 1 2 13. I feel confused or in a fog
0 1 2 14. I cry a lot
0 1 2 15. I am pretty honest
0 1 2 16. I am mean to others
0 1 2 17. I daydream a lot
0 1 2 18. I deliberately try to hurt or kill myself
0 1 2 19. I try to get a lot of attention
0 1 2 20. I destroy my own things
0 1 2 21. I destroy things belonging to others
0 1 2 22. I disobey my parents
0 1 2 23. I disobey at school
0 1 2 24. I don't eat as well as I should
0 1 2 25. I don't get along with other kids
0 1 2 26. I don't feel guilty after doing something I shouldn't
0 1 2 27. I am jealous of others
0 1 2 28. I am willing to help others when they need help
0 1 2 29. I am afraid of certain animals, situations, or places, other than school (describe): _____
_____
_____
0 1 2 30. I am afraid of going to school
0 1 2 31. I am afraid I might think or do something bad
0 1 2 32. I feel that I have to be perfect
0 1 2 33. I feel that no one loves me
0 1 2 34. I feel that others are out to get me
0 1 2 35. I feel worthless or inferior
0 1 2 36. I accidentally get hurt a lot
0 1 2 37. I get in many fights
0 1 2 38. I get teased a lot
0 1 2 39. I hang around with kids who get in trouble
0 1 2 40. I hear sounds or voices that other people think aren't there (describe): _____
_____
_____
0 1 2 41. I act without stopping to think
0 1 2 42. I would rather be alone than with others
0 1 2 43. I lie or cheat
0 1 2 44. I bite my fingernails
0 1 2 45. I am nervous or tense
0 1 2 46. Parts of my body twitch or make nervous movements (describe):
_____
_____
0 1 2 47. I have nightmares
0 1 2 48. I am not liked by other kids
0 1 2 49. I can do certain things better than most kids
0 1 2 50. I am too fearful or anxious
0 1 2 51. I feel dizzy
0 1 2 52. I feel too guilty
0 1 2 53. I eat too much
0 1 2 54. I feel overtired
0 1 2 55. I am overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains (*not* headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feel sick
0 1 2 d. Problems with eyes (describe):
_____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____
_____
0 1 2 57. I physically attack people
0 1 2 58. I pick my skin or other parts of my body (describe): _____
_____
_____
0 1 2 59. I can be pretty friendly
0 1 2 60. I like to try new things
0 1 2 61. My school work is poor
0 1 2 62. I am poorly coordinated or clumsy
0 1 2 63. I would rather be with older kids than with kids my own age

Please see other side

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 64. I would rather be with younger kids than with kids my own age
0 1 2 65. I refuse to talk
0 1 2 66. I repeat certain actions over and over (describe): _____
_____
_____
0 1 2 67. I run away from home
0 1 2 68. I scream a lot
0 1 2 69. I am secretive or keep things to myself
0 1 2 70. I see things that other people think aren't there (describe): _____
_____
_____
0 1 2 71. I am self-conscious or easily embarrassed
0 1 2 72. I set fires
0 1 2 73. I can work well with my hands
0 1 2 74. I show off or clown
0 1 2 75. I am shy
0 1 2 76. I sleep less than most kids
0 1 2 77. I sleep more than most kids during day and/or night (describe): _____
_____
_____
0 1 2 78. I have a good imagination
0 1 2 79. I have a speech problem (describe): _____
_____
_____
_____
0 1 2 80. I stand up for my rights
0 1 2 81. I steal at home
0 1 2 82. I steal from places other than home
0 1 2 83. I store up things I don't need (describe):
_____
_____
0 1 2 84. I do things other people think are strange (describe): _____
_____
_____
0 1 2 85. I have thoughts that other people would think are strange (describe): _____
_____
_____
_____
0 1 2 86. I am stubborn
0 1 2 87. My moods or feelings change suddenly
0 1 2 88. I enjoy being with other people
0 1 2 89. I am suspicious
0 1 2 90. I swear or use dirty language
0 1 2 91. I think about killing myself
0 1 2 92. I like to make others laugh
0 1 2 93. I talk too much
0 1 2 94. I tease others a lot
0 1 2 95. I have a hot temper
0 1 2 96. I think about sex too much
0 1 2 97. I threaten to hurt people
0 1 2 98. I like to help others
0 1 2 99. I am too concerned about being neat or clean
0 1 2 100. I have trouble sleeping (describe): _____
_____
_____
0 1 2 101. I cut classes or skip school
0 1 2 102. I don't have much energy
0 1 2 103. I am unhappy, sad, or depressed
0 1 2 104. I am louder than other kids
0 1 2 105. I use alcohol or drugs for nonmedical purposes (describe): _____
_____
_____
_____
0 1 2 106. I try to be fair to others
0 1 2 107. I enjoy a good joke
0 1 2 108. I like to take life easy
0 1 2 109. I try to help other people when I can
0 1 2 110. I wish I were of the opposite sex
0 1 2 111. I keep from getting involved with others
0 1 2 112. I worry a lot

Please write down anything else that describes your feelings, behavior, or interests

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS

Appendix J

Emotion categories of the LIWC and their corresponding definitions and examples

Emotion categories, their corresponding definitions and examples

Emotion Category	Definitions	Examples
Affect (Includes all other categories and sub-categories)	Any expression, general or specific, of feeling	Happy, bitter
Negative Emotion	General expression of negative feelings	angry, sad, wrong
Anger (sub-category)	Expression of hostility, rage, opposition	angry, fight, rude
Depression (sub-category)	Expression of sadness, sorrow	sad, grief, worthless
Positive Emotion	General expression of positive feelings or attributions	happy, elegant, joy
Optimism (sub-category)	Expression of self-confidence, hope	pride, win, certainty
Postitive feeling (sub-category)	Expression of positive feelings	Happy, joy, love

Appendix K

Letters of permission

Université de Montréal
Faculté des études supérieures
Vice-décanat

Le 13 octobre 1998

Objet : Rédaction d'une thèse de doctorat en anglais

Madame,

Pour faire suite à votre lettre du 30 septembre 1998, la Faculté des études supérieures vous autorise à déposer votre thèse de doctorat en anglais.

Veuillez agréer, Madame, l'expression de mes sentiments les meilleurs.

Le vice-doyen,

[redacted]

Fernand A. Roberge
Secteur sciences de la santé

FAR/lstl
c.c. : Hélène David
Directrice adjointe & resp. de la formation professionnelle
Département de psychologie

N.B: Pour les étudiants qui ont reçu l'autorisation de rédiger en une langue autre que le français, l'introduction et la discussion seront rédigées dans cette langue.

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Montréal (Québec) H3C 3J7

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(514) 343-6922
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Université de Montréal

Faculté des études supérieures
Vice-décanat

Le 29 mars 2004

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Le vice-doyen,

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Secteur Santé

/vs

c.c. : Mme Monica O. Gilbert, directrice de recherche
Mme Marcelle Cossette-Ricard, adjointe au directeur - Psychologie

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Déclaration de tous les coauteurs autres que l'étudiant

1 : Identification

Jasmine Joncas

3-220-1-2 Psychologie - recherche et intervention option clinique béhaviorale

2 : Description de l'article

The efficacy of self-disclosure through journal writing on State and Trait anxiety in young adolescent girls: Ensuing theoretical implications.

Auteurs : Jasmine Joncas, Monica O'Neill-Gilbert

L'article a été soumis dans le journal Emotion.

3 : Déclaration de tous les coauteurs autres que l'étudiant

À titre de coauteur de l'article identifié ci-dessus, je suis d'accord pour que Jasmine Joncas inclue cet article (An analysis of structured journal entries: What young adolescent girls write about in their journals.) dans sa thèse de doctorat qui a pour titre The Impact of Written Disclosure through Journal Writing on Adjustment in Young Adolescent Girls: Theoretical and Clinical Implications.

[redacted] Aug. 1 2004

Coauteur Signature

Date

Déclaration de tous les coauteurs autres que l'étudiant

1 : Identification

Jasmine Joncas

3-220-1-2 Psychologie - recherche et intervention option clinique béhaviorale

2 : Description de l'article

The impact of journal writing on internalization and externalization scores in young adolescent girls: Links between Coping theory and the Inhibition-Confrontation theory.

Auteurs : Jasmine Joncas, Monica O'Neill-Gilbert

L'article est en préparation et est destiné pour le journal Cognitive behaviour therapy.

3 : Déclaration de tous les coauteurs autres que l'étudiant

À titre de coauteur de l'article identifié ci-dessus, je suis d'accord pour que Jasmine Joncas inclue cet article (The efficacy of self-disclosure through journal writing on State and Trait anxiety in young adolescent girls: Ensuing theoretical implications.) dans sa thèse de doctorat qui a pour titre The Impact of Written Disclosure through Journal Writing on Adjustment in Young Adolescent Girls: Theoretical and Clinical Implications.

[redacted] Aug 1, 2004

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1 : Identification

Jasmine Joncas

3-220-1-2 Psychologie - recherche et intervention option clinique béhaviorale

2 : Description de l'article

A descriptive analysis of structured journal entries; what do young adolescent girls write about in their journals?

Auteurs : Jasmine Joncas, Monica O'Neill-Gilbert

L'article est en préparation et est destiné pour le journal Adolescence.

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[redacted] Aug 1 2004

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