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The Role of Pictorial Representations in the Assessment of Psychological Mindedness: A Cross-Cultural Perspective

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Abstract

Psychological mindedness refers to a person's ability to perceive relationships among thoughts, feelings, and action with the goal of learning the meanings and causes of his/her experiences and behavior. Psychological mindedness is clinically important because it influences the patient selection for and the efficacy of psychotherapy. Individuals who have difficulty symbolizing and resolving emotional conflict, and verbally expressing their emotions, are considered to lack psychological mindedness and are sometimes labelled "alexithymic." Culture also influences individual styles of emotional expression and the manner and extent to which feelings are labelled as such. Such cultural differences may be interpreted as differences in psychological mindedness.

The present study examined cultural differences in styles of emotional expression and psychological mindedness by comparing two groups: Euro-Canadians and Cree Amerindians - a group that has been characterized as less verbally expressive or taciturn.

In this study, 36 Cree and 36 Euro-Canadian subjects were given a verbal measure of alexithymia, the Toronto Alexithymia Scale (TAS) and a pictorial measure, the Scored Archetypal Test-9 (SAT9), and measures of depressive and somatic symptomatology (the CES-D and SCL-90 Somatization Scale). Twelve subjects also received a standardized, qualitative art therapy measure, the Ulman Personality Assessment Procedure (UPAP). Results showed no overall difference between the two groups on any measure. However, the TAS subscale (Factor 1), relating to difficulty with identifying feelings and bodily sensations, revealed a significant difference with the Cree. Cultural differences were also found in the pictorial representations of the SAT9 and the UPAP.

Results do not lend support to the notion that cultural differences in style of emotional expression may result in alexithymia. The TAS appeared to have just as good internal consistency among the Cree as among the matched sample of Euro-Canadians. This may suggest that the TAS is a valid clinical indicator of the alexithymia construct among the Cree. However, the TAS was substantially related to education. The difference between Cree and Euro-Canadians on TAS Factor 1 was eliminated when education was statistically controlled. Among the Cree, it was also strongly related to a measure of conscious emotion suppression. The SAT9 correlated with the TAS in the opposite of the expected direction, and it was completely unrelated to emotion suppression and somatic symptoms.

The study revealed more fundamental problems with the construct of alexithymia, suggesting that alexithymia was only modestly related to somatic distress, and that it is strongly related to levels of depressive symptomatology. Although this study helped clarify the clinical relevance of differences in styles of emotional expression among the Cree, further cross-cultural research is warranted to construct a more well-rounded understanding of cultural differences in emotion expression.

Résumé

La notion de pensée psychologique ("*psychological mindedness* ") fait référence aux abilités qu'a un individu à percevoir des liens entre les pensées, les sentiments et les actions et ce, afin d'apprendre les différentes significations et causes de ses expériences et de ces comportements. Cette notion est importante sur le plan clinique car elle influence la sélection ainsi que l'efficacité de la psychothérapie chez le-la patient-e. Les individus qui ont de la difficulté à symboliser et à résoudre les conflits d'ordre émotionel, de même qu'à exprimer leurs émotions, sont considérés comme manquant de pensée psychologique et sont parfois identifiés comme étant alexithymiques. La culture influence également les styles d'expression émotionelle chez les individus ainsi que la façon et l'intensité avec lesquelles ils étiquettent les émotions comme telles. Ces différences culturelles peuvent être interprétées comme reflétant un écart dans le niveau de pensée psychologique.

La présente étude a pour but d'étudier les différences culturelles au niveau des styles d'expressions émotionelles et de pensée psychologique en comparant deux groupes: des Euro-Canadiens et des indiens Cris, ces derniers étant caractérisés comme s'exprimant moins bien sur le plan verbal ou comme taciturnes.

Dans la présente étude, nous avons administré une mesure verbale d'alexithymie, le *Toronto Alexithymia Scale* (TAS), à 36 sujets Cris et 36 sujets Euro-Canadiens, et une mesure picturale, le *Scored Archetypycal Test9* (SAT9), ainsi que des mesures de symptomatologie dépressive et somatique (*CES-D* et *SCL-90 Somatization Scale*). Nous avons également utilisé une mesure standardisée et qualitative d'art-thérapie, le *Ulman Personality Assessment Procedure* (UPAP), auprès de 12 sujets. Les résultats démontrent aucune différence globale entre les deux groupes au niveau de chacune des mesures utilisées. Toutefois, les résultats à la sous-échelle du TAS (Facteur 1), mesurant les difficultés associées à l'identification des sentiments et des sensations corporelles, démontrent une différence significative chez les Cris. Des différences culturelles ont également été identifiées dans les représentations picturales du SAT9 et du UPAP.

Les résultats ne confirment pas l'hypothèse que les différences culturelles dans le style d'expression émotionnelle sont associées à l'alexithymie. La consistance interne du TAS semble aussi bonne chez les Cris que chez les sujets appariés Euro-Canadiens. Ceci suggère peut-être que le TAS est une mesure clinique valide du concept d'alexithymie chez les Cris. Toutefois, le TAS est fortement associé à l'éducation. La différence entre les Cris et les non-Cris sur la sous-échelle du TAS (Facteur 1) est éliminée quand l'éducation est statistiquement contrôlée. Chez les Cris, le TAS est également vivement relié à une mesure de suppression consciente des émotions. Le SAT9 est corrélé avec le TAS dans le sens inverse à celui espéré et est complètement indépendant de la suppression émotionnelle et des symptômes somatiques.

L'étude a dévoilé d'autres problèmes fondamentaux avec le concept d'alexithymie suggérant que l' alexithymie est uniquement modestement relié à la détresse somatique mais fortement associé aux niveaux de symptomatologie dépressive. Malgré le fait que cette étude aide à clarifier la pertinence clinique des différences dans les styles d'expression émotionnelle chez les Cris, des études inter-culturelles additionnelles sont nécessaires afin d'en arriver à une compréhension plus complète des différences culturelles dans l'expression des émotions.

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Chapter 1 - Introduction

A common assumption in the field of psychodynamic psychotherapy is that successful treatment is greatly enhanced if the patient is psychologically minded. Psychological mindedness has been defined as "a person's ability to see relationships among thoughts, feelings, and action with the goal of learning the meanings and causes of his experiences and behavior" (Appelbaum, 1973, p.36). Coltart (1988) adds that psychological mindedness implies the ability to symbolically express one's own feeling states. Clinically, it appears that some individuals have difficulty symbolizing and resolving emotional conflict, thus, manifesting a lack of psychological mindedness. This deficit has been called alexithymia (Sifneos, 1973). Patients suffering from alexithymia are unable to label their feelings and they are often considered as unsuitable for psychotherapy, due to their lack of psychological mindedness.

Psychological mindedness is clinically important for the following reasons:

(1) it may influence clinicians' judgements of patients' suitability for psychotherapy, the selection of a specific treatment modality, and treatment recommendations;

(2) it may determine the efficacy of therapy and patients' ability to make use of psychotherapy or other modes of help;

(3) it may contribute to individuals' tendency to somatize distress, where somatic sensations are attributed to physical illness rather than emotional conflict or distress. Style of emotional expression may also play a role in other forms of psychopathology, including substance abuse and eating disorders (Appelbaum, 1973; Coltart, 1988).

The manner in which psychological mindedness and alexithymia are assessed and used in treatment, and how culture is considered in this whole process are highly relevant to issues in cross-cultural psychiatry. There is increased recognition in psychiatry that treatment approaches and counselling must be adapted to the experience of minority peoples. Modes of symbolizing and expressing emotion are known to vary widely cross-culturally (Shweder & Bourne, 1982; Kleinman, 1988).

Cross-cultural psychiatry has documented (Kleinman, 1988; Littlewood, 1992; Prince, 1987) cultural differences in styles of explanation of emotion, as well as self-understanding or self-description. Culture also influences individual styles of emotional expression and the manner and extent to which feelings are labelled as such; this may be interpreted as differences in psychological mindedness. It is unclear whether cultural differences in psychological mindedness or emotional expression have pathological significance. Treating a difference in cultural style as evidence of a psychological deficit may lead to mistaken assessments and ineffective treatment decisions.

Similarly, the construct of alexithymia may involve ethnocentric biases, demonstrating the preoccupation with the verbal expression of emotion in North American-cosmopolitan culture (Kirmayer, 1987). Such ethnocentric biases may influence both the assessment and treatment processes in mental health care leading to biases or

errors in diagnosis, and insensitivity and inequalities in delivery of care (Kleinman, 1988). At this point, it is important to clarify that I am not claiming that alexithymia is not a valid construct, however, its conceptual status and its application in assessment with patients from diverse cultures should be reconsidered.

This study was designed to explore the relationship of cultural differences in the expression of emotion and feeling states, to measures of psychological mindedness. The larger issue raised by this study, although not studied directly, is whether clinical assessment is biased by cultural explanations for specific styles of emotional expression.

Current measures of alexithymia may be highly correlated with the tendency to use verbal modes of expression of emotion. Where cultural modes of expression differ, individuals may appear alexithymic. However, if these same individuals are able to use other modes of emotional expression and symbolic conflict resolution, and do not evidence high levels of somatic distress, the measures of alexithymia, or indeed, the whole concept, may not be cross-culturally valid. Due to the emphasis on the verbal expression of emotion, the value of nonverbal modes of expression of emotion has not been systematically examined within psychiatry.

The Cree are interesting in this regard because they have been characterized as taciturn, reserved and less verbally expressive of emotion than Anglo-Canadians (Darnell, 1981; Prince, 1993). Prince (1993) describes his experience with the Cree in psychotherapy as difficult initially because of the Cree's laconic style of verbalization. Interestingly, Prince argues that this lack of verbalization is a function of the context and not necessarily a Cree character trait, and that after working with the Cree for several

years, he noticed a change in patients' expressive style. Nonetheless, this change in expressive style could be related to reciprocal adaptation by both the psychiatrist and clients and a developed sense of comfort. Moreover, the issue of a restricted linguistic code (Bernstein, 1964) may also be of relevance in relation to the psychotherapeutic relationship between a Cree patient and a non-Cree therapist. It is "a code where changes in meaning are more likely to be signalled nonverbally than through changes in verbal selections" (p. 196). A psychotherapeutic experience is structured in a verbally significant form and the cultural identity of an individual with a restricted code does not allow for speakers to elaborate verbally their intent (Bernstein, 1964). It may be that Prince gradually learned to read the restricted communication code of his patients as he acquired tacit knowledge of their social worlds.

Part of the argument presented in this study is that emotional experience consists of various levels. The codes of communication that Bernstein describes constitute one level of emotional experience, involving communication of emotion. Other levels involve the organization of emotions and emotional expression. It is tempting to conflate these levels into one construct, like focusing on emotional expression alone without considering the roles played by the other levels of emotional experience. Individuals may have the ability to organize emotions in their minds, but have difficulty expressing their emotions or even difficulty in encoding or decoding them. The Cree for instance, may be capable of organizing their emotions and express them through culturally relevant means, which may not emphasize verbal expression.

Before beginning to work with the Cree, I was told by some non-Cree colleagues,

that it would be an arduous task since the Cree children are apparently "blocks of ice" and there is a pronounced inability to describe feelings. In my clinical experience with Cree children, the opposite was noted where the children showed their readiness to express themselves through art and establish a therapeutic relationship. Art therapy provides an effective channel of emotional communication with many Cree clients (Ferrara, 1991a, 1991b, 1994). Thus, the Cree's expressive style may be more nonverbal owing to their culture and response to the social context of clinical assessment and treatment. Despite this de-emphasis of verbal expression of emotion, they may readily use the nonverbal modes of expression afforded by art therapy to symbolize and communicate their feelings. This raises questions about whether the Cree, or any other cultural group which is inclined to be non-verbal, should be considered as alexithymic. The inability or reluctance to talk about feelings, imagery or fantasy may not indicate an underlying psychological deficit. Thus, what remains open to question is how global the construct of alexithymia actually is.

Objectives

The objectives of this study include identifying cultural variations in styles of verbal expression and pictorial representation related to psychological mindedness. The study addressed three specific research questions:

(1) What is the nature of emotional expression among Cree and what roles do verbal and nonverbal forms of emotional expression, including the role of artistic and pictorial methods of expression, play among the Cree?

(2) Are Cree subjects more likely than Euro-Canadians to be alexithymic on existing verbal and nonverbal measures?

(3) Does alexithymia correlate with somatic distress among the Cree, as it has been hypothesized to do in the general population?

The specific hypotheses to be examined in this research study include the following:

(1) The Cree will be more liable to score high on alexithymia on existing verbally oriented measures. Due to their tendency to be more reticent, for instance, they will endorse items of the TAS such as "having difficulty with finding the right words for feelings," and "not being able to describe feelings easily" (Taylor, Bagby & Parker, 1992).

(2) The Cree will appear less alexithymic when tested by pictorial methods. The Cree appear to be more comfortable in expressing themselves through the art medium or the nonverbal means of communication (Ferrara, 1991a).

(3) "Alexithymia" will be more weakly correlated with somatic distress among the Cree than among Euro-Canadians. Thus, the Cree will appear alexithymic even if they have a culturally normative level of emotional symbolization, which does not lead to somatization.

Outline of Thesis

The thesis is divided into three sections. The first section consists of the literature review of the relevant constructs in relation to this research. The concepts that will be

reviewed include psychological mindedness and alexithymia, and other related constructs, such as levels of emotional awareness, repressive coping style, levels of thinking, attributional style and somatization.

Imagery, art expression and art psychotherapy constructs that are relevant to this study will be presented, as well as, their links with the concepts of psychological mindedness, and the cultural influence on imagery, art expression and art therapy. The cross-cultural considerations of psychological mindedness and alexithymia and their related psychiatric concepts, and theories on emotion will be developed. In addition, the ethnographic, historical and cultural context of the Cree people of the Eastern Subarctic, as well as their style of communication, narratives, their beliefs and views of imagery, dreams and art will be illustrated. Case vignettes with Cree individuals will be used to highlight specific points.

The second section provides the rationale for the study, a description of the sample, and measures used, as well as, the ethical considerations and the procedures of the study. This section will also include the results of the research, along with a discussion of the findings. The final section provides a discussion of the larger implications of these findings and the need for future research.

Chapter 2 - Psychological Mindedness

The concept of psychological mindedness

Psychological mindedness refers to an individual's responsiveness to inner needs, motives and experiences of his/her self (Taylor, 1987). Both Appelbaum (1973) and Abramowitz and Abramowitz (1974) define psychological mindedness as involving ideational capacities that are highly correlated with verbal ability and psychological sophistication. In the psychotherapy milieu, psychologically-minded people are considered suitable for psychotherapy because they are driven by their own suffering to seek treatment.

Freud was among the first psychoanalysts to consider the significant effects of the assessment of suitability for psychotherapy on treatment decisions within the primary stages of therapy. In 1895, Freud's doctrine was that a patient must talk, remember and verbally express important, emotionally-filled early childhood experiences (Prince, 1987). From this point on, expressive verbal psychotherapies became the dominant treatment modality in our Western-cosmopolitan society.

Coltart (1988) outlines the features of psychological mindedness, which she considers important in the assessment stage of the diagnostic interview. The qualities of psychological mindedness that the diagnostician should look for, include the following:

(1) the client's capacity to give a substantial history, one that is in depth and becomes more coherent as developed by the client.

(2) the capacity to offer such a history without much prompting, showing a level of self-

awareness.

(3) the capacity to bring up memories with appropriate affects.

The developments that should ensue from this history include the following:

(4) some awareness of an unconscious inner world.

(5) a capacity to observe it reflectively.

(6) a desire to obtain and handle an increased responsibility for the self.

(7) imagination

(8) some self-esteem and capacity for fulfilment (Coltart, 1988).

Coltart (1988) concludes that it is the therapist's responsibility to create a therapeutic environment based on his own psychological mindedness. Therefore, these eight qualities become prerequisites as well as the medium for psychotherapy. In Appelbaum (1973), Abramowitz and Abramowitz (1974), and Coltart's view, psychotherapeutic treatment is greatly enhanced if the patient is psychologically minded.

A recent study investigating the value of the psychological mindedness construct in predicting therapeutic outcome, suggested that the higher an individual's psychological mindedness the greater the likelihood of his becoming engaged in therapy and benefiting from it (Conte, Plutchik, Brandi-Jung, Picard, Byram-Karasu, & Lotterman, 1990). However, what is not addressed in Conte et al.'s (1990) study is how much of the patient's engagement in therapy is related to the interaction between patient and therapist, the patient's selection of the therapist, as well as the intrinsic traits of both the therapist and the patient and how compatible they may be.

Interestingly, Appelbaum (1973) is the only researcher in this area of

psychological mindedness, who notes that people from some cultures may be more amenable to thinking psychologically than those from other cultures. Also, relevant to the present study is Appelbaum's comparison of psychological mindedness with the art process, which he based on Kris' (1952) concept of regression in service of the ego.

> The applicability of regression in the service of the ego to both art and psychological-mindedness alerts us to their comparability. (As) both art and psychological-mindedness emerge from a regressive-constructive process with something created anew. (...) Conceptualizing psychological-mindedness as a kind of artistic creativity has implications for the philosophy of psychoanalysis, for the selection and education of practitioners and patients, and for technique (Appelbaum, 1973, p.40-41).

Milner (1957), a psychoanalyst, also addresses the significance of regression and how the inhibitions to create are derived from a fear of regression. Milner describes her self-discovery through art as " a search, a going backwards perhaps, but a going back to look for something, something which could have value for adult life if only it could be recovered" (p. 10). Both Milner and Appelbaum maintain that in the process of psychological thinking, the ego is split between an observing and experiencing part, which is similar to the art-making process and especially what occurs in the art therapeutic milieu. This will be further developed in a later section on art therapy. This dual awareness or split is similar to psychological mindedness but nonverbal. In other words, in psychological mindedness, the observing part of the ego relates to the individual's ability to perceive relationships among thoughts, feelings, and action, and

the experiencing part refers to the goal of learning the meanings and causes of one's experiences and behavior (Appelbaum, 1973).

Measures and concepts of psychological mindedness

Given that psychological mindedness has been argued to be crucial to psychotherapy, we may turn to the problem of operationalizing and measuring it.

Psychological mindedness has been conceptualized and/or measured using different constructs such as, alexithymia, levels of emotional awareness, repressive coping style, levels of thinking, attributional style and somatization. Table A outlines the range of concepts and measures related to psychological mindedness as well as the dimensions of each concept.

Alexithymia

"Alexithymia" a term meaning "lacking words for feeling" was originally coined by Sifneos (1973) from mixed Greek and Latin roots. However, the underlying concept was not new. Historically, psychoanalytic theorists believed that inner conflicts when not expressed verbally, were expressed through somatic channels (Lesser, 1981).

The concept of alexithymia stems from a large body of consistent clinical and phenomenological observations (Lesser, 1981). The historical precursors of alexithymia outlined below are presented in Table B. The dimensions of alexithymia include the following: (a) an inability to describe feelings, (b) an inability to distinguish emotions from feelings, (c) a paucity of fantasies, (d) an incapacity for introspection, (e) focus on

external world, (f) affective arousal often somatized, (g) expressive style is stoic, unemotional, (h) thinking that pragmatic and instrumental.

Ruesch (1948) described patients with psychosomatic illnesses as "infantile personalities." These individuals experience a developmental delay in their personal growth process due to their inability to express their conflicts verbally and symbolically, and so, they tend to somatize their emotions. Their only choice becomes to somatize their emotions. Patients with no verbal language for feeling had also been described as "emotional illiterates" by Freedman and Sweet (1954).

Later in France, the concept of "pensée opératoire," translated as "operative thinking," was proposed by Marty and de M'Uzan (1963) as a characteristic of patients with "psychosomatic diseases". This concrete, reality-based way of thinking is also characterized by an absence of fantasy life and dreams.

Shands (1958) also observed patients who appeared "blank" when asked about feelings and were unable to describe their emotions. Shands viewed these patients as unsuitable for psychotherapy. In developing an understanding of alexithymia, Shands (1977) interestingly placed it within a Piagetian framework describing how those clients who are unsuitable for psychotherapy remain in the concrete operational stage of cognitive development. Those patients who are suitable for psychotherapy demonstrate formal operational thinking in their ability to reflect upon their feelings. Shands (1977) goes on to explain that for the "unsuitable" clients the problem is that something is missing, yet the question that remains is whether it is possible to learn what one has never known. When one suffers a loss in his human environment, he does not know how

important that loss is because he can not feel it in a meaningful way.

Kegan (1982) further develops the theory of concrete-operational thought, in a way which illuminates Shands' framework. Kegan notes that when a concrete-operational child is asked about himself/herself, the answers are characterized by concrete activities, capacities, limits, and physical transformations of the body. A formal-operational child on the other hand, relates to the metaphysical, psychological self. The concrete-operational child, as Kegan (1982) explains "explores the limits of the world...without the recognition of the third dimension" (p.36). This third dimension is described by Kegan as the psychological self.

These characteristics of the concrete-operational thought are similar to the thought process of an individual considered as alexithymic, which is characterized by being more in touch with the concrete, pragmatic viewpoint rather than the psychological self. This theory of relating alexithymia to concrete operational thinking directly relates to Marty and de M'Uzan's (1963) theory of operative thinking and Lane and Schwartz's (1987) model of the levels of emotional awareness, derived from the cognitive development approach, which will be described in a later section.

McDougall (1985) proposes a "psychodynamic, economic theory" of alexithymia, which is complementary to the neurobiological one, Sifneos' (1973) original theory. Alexithymia may be viewed as being caused by a physiological disturbance, leading one to be more in tune with their physiological behavior. In her theory of alexithymia as a form of defensive operations, the author notes that a more adequate translation of the Greek prefix "alexi" would be "against" or "vanquisher of" (McDougall, 1985).

McDougall (1985) proposes that everyone may from time to time, function in operational or alexithymic ways. "Faced with overwhelming events, we may find ourselves temporarily out of touch with certain areas of our psychic reality. At such times we may fail to contain and reflect upon the experiences that besiege us" (p.160). This equates alexithymia with a lack of reflection or psychological mindedness.

As Prince (1987) argues, the alexithymia construct only emerged during attempts to apply modern forms of expressive verbal psychotherapies. One may conclude that being alexithymic is similar to not being psychologically minded due to the incapacity to express one's emotions verbally and be self-reflective. Patients with alexithymic characteristics were considered to be unresponsive to psychoanalysis or psychodynamic psychotherapy and were referred for other treatment modes without further investigation of reasons for their cognitive/affective style (Taylor, Bagby, Ryan and Parker, 1990).

Alexithymia has been described by various researchers with considerable consistency, yet it is not accepted by all (Taylor, 1984). The concept originated in the context of psychosomatic illness; however, it is increasingly applied to patients with various disorders, such as ulcerative colitis, Chrohn's disease, substance abuse disorders (Lesser, 1981; Taylor, 1987). Lesser and Lesser (1983) argue that although alexithymia has gained acceptance as a concept, there has been a tendency to interpret data in light of its existence, instead of continuing to establish its validity. Even Taylor (1987) acknowledges that the prevalence of alexithymia within the general population is unknown and the influence of demographic factors remains a question. An investigation of demographic influences conducted by Borens, Grosse-Schulte and Kortemme (1977),

showed that alexithymia may be more common among patients from the lower social classes, who have a greater tendency to express emotional distress in somatic terms. Lesser, Ford and Friedmann (1979) also found significant negative correlations between alexithymia and socioeconomic status. Lesser et al. (1979) pointed out that alexithymia is a trait with many determinants, including socioeconomic status and patient sophistication.

More recent findings demonstrate that sociodemographic characteristics of age and education are related to specific components of alexithymia (Kauhanen, Kaplan, Julkunen, Wilson & Salonen, 1993; Kirmayer & Robbins, 1993). In Kauhanen, et al.'s (1993) population-based study of 2682 middle-aged men, the results showed that education, income and occupational status were inversely related to alexithymia, which suggested that alexithymia could not only be viewed as a psychological construct, but a socially determined phenomenon. In addition, Kirmayer and Robbins (1993), in examination of the relationship of alexithymia and sociodemographic characteristics, found that among the 244 family medicine patients interviewed, alexithymia was significantly related to age and lower educational level.

Etiology of alexithymia

Most discussions on the etiology of alexithymia focus on psychosomatic phenomena and symptom formation. It is a fallacy to view alexithymia and psychosomatic symptoms as always associated (Lesser, 1981). Although alexithymia has been portrayed as a psychological deficit, it also may have sociocultural origins.The

sociocultural theory of etiology of alexithymia stresses social learning and cultural determinants as significant factors. Sociocultural factors must also be taken into account when evaluating the alexithymia construct, due to the fact that styles of communication are learned within a social context, and some languages impose various reservations on the expression of emotion (Taylor, 1987; Leff, 1973). If the sociocultural environment plays a role, then alexithymia may be highly context-dependent.

In developing an understanding of alexithymia, several debates have surfaced. There is controversy around the causes of alexithymia. Specifically, is it a primary phenomena or secondary to somatic illness, and also, is it genetic or developmental? The specific debates that will be outlined here deal with whether alexithymia is a state or trait; state, relating to it being partial and temporary, and a trait in the sense of it being global and consistent. The underlying issue of understanding alexithymia as a conflict or a deficit, which in some way is connected to the state or trait controversy, will also be addressed.

The state or trait controversy stems from personality research measuring the characteristics of an individual. Alexithymia may be viewed as either a reflection of a more or less transient state the person is in or as a permanent personality trait. For example, Sifneos (1972) and Nemiah (1977) view alexithymia as the result of a neurophysiologically based incapacity to experience fantasy and affect. The trait view tends to be associated with the deficit model, to the extent that deficits are based on such biologically based or irreversible characteristics.

Alexithymia is also viewed by some theorists as being due to intrapsychic defense

mechanisms, such as repression and denial. McDougall (1985) is representative of this conflict-oriented view. She claims that when emotional conflict is intensified alexithymic behaviors emerge. In McDougall's interpretation alexithymia appears to act more like a state rather than a trait or something that persists over time and across situations; that is, the alexithymic state intensifies when conflict escalates and so, it is influenced by contextual factors. Alexithymia becomes a defensive process.

A related yet separate issue concerns the role of alexithymia in psychosomatic causation. Three alternative views on psychosomatic causation include: (a) alexithymia antecedes and contributes directly to psychosomatic disease (b) alexithymia influences illness behavior, leading to the somatization of distress, and (c) alexithymia is a consequence of somatic illness (i.e. secondary alexithymia).

When considering the implications of alexithymia as a clinical construct, it is important to take into account the impact alexithymia has on illness behavior and physiological behavior. Alexithymia may be viewed as being caused by a physiological disturbance, leading one to be more in tune with their physiological responses instead of emotional.

The second view is that alexithymia may be influenced by the manner in which an individual perceives and interprets sensations as being somatic. In this latter theory, the reasons alexithymic individuals have high levels of somatic symptoms is due to their tendency to interpret sensations as somatic. Somatic symptoms increase due to the physiological effects, which in turn helps create the clinical dimension of alexithymia. In Cohen, Auld and Brooker's (1994) study, both the TAS and the SAT9 (measures of

alexithymia) did not correlate with classical psychosomatic disorders. From this they concluded, lending support to the somatization theory, that "alexithymia is not the cause or result of some physical disorder or state rather is a part of a pattern of responses to trauma, a pattern that includes the tendency to experience and report physical signs and symptoms" (p.124).

Related to the reverse causality theory is the concept of "secondary alexithymia," which is seen as resulting from a primary medical illness or other form of stress (Lesser, 1981). Secondary alexithymia may be due to several different conditions, such as alcoholism. According to the somatization theorists, one becomes alexithymic because one has a stomach ache. For example, one is more likely to express the pain of a stomach ache and to divorce it from stressful and emotional factors that contribute to it. "Primary alexithymia," as described by Freyberger (1977) is a life-long dispositional factor that can lead to psychosomatic illness.

Lesser (1981) criticizes such postulated subtypes of alexithymia as giving the impression that it is a well validated entity when it really is not. He goes on by saying that it is "most useful to view alexithymia as a phenomenologically derived clinical construct" (p. 533).

These three alternative views on the role of alexithymia in psychosomatic causation are not mutually exclusive. In fact, all three may play a significant role. In terms of the controversies around alexithymia, I believe that it is premature to focus on one side of the debate while excluding the possibility that alexithymia could be related to the other side of the controversy, or promote one alternative view over the others.

Alexithymic characteristics are also context-dependent and the socio-cultural matrix plays a significant role. Individual cases may present different dimensions of alexithymia. In other words, at times alexithymia may be clinically observed as more of an enduring trait and reflect an inner conflict. In other cases, it may be better understood as a neurological deficit, which implies an enduring trait (Nemiah, 1977). As Nemiah (1977) concludes, it is inappropriate and ineffective to conceptualize and focus on one theoretical approach, while excluding others. He claims that to understand the totality of alexithymic phenomena, one needs a more encompassing etiological model including components dealing with development, neuroanatomy and social context.

Levels of Emotional Awareness

A cognitive-developmental theory of levels of emotional awareness and its application to psychopathology was developed by Lane and Schwartz (1987). This model was initially formulated to provide an organizing framework for understanding individual differences in emotional experience and expression (Lane & Schwartz, 1987). The primary thesis of this framework is that emotional awareness is a type of cognitive processing that undergoes five levels of structural transformation along a developmental continuum. This follows a cognitive-developmental sequence derived from an integration of theories of Piaget and Werner (Lane & Schwartz, 1987). Lane and Schwartz's theory suggests that a more developed cognitive organization is associated with a greater degree of emotional organization. The levels progress from bodily sensations to "blends of feelings," in parallel with cognitive development from sensorimotor through

preoperational, and concrete operational to formal operational thought.

The first level of emotional awareness referred to as the sensorimotor reflexive stage, deals with the bodily sensations through the activation of involuntary motor phenomena. In response to emotional arousal, the individual will report nothing or only bodily sensations. At the second level is the "body in action" or the "sensorimotor enactive," where emotion is experienced as both a bodily sensation and an action tendency. A conscious feeling state has not yet been formed in this level. The third level involves the awareness of individual feelings, based on preoperational thinking. For the first time, a representation of emotion is possible and emotional experience now becomes both psychological and somatic, still the range of emotional experience is limited.

The fourth level involves "blends of feelings", connected with the concrete operational stage of cognitive development. Here, the range of emotional experience expands and has more coherence. The fifth and last level is referred to as "blends of blends of feelings", and it is linked with the formal operational stage. There is now the capacity to mix feelings of varying qualities. This advanced level is characterized by greater differentiation and integration in one's appreciation of the experience of others (Lane & Schwartz, 1987).

The theory of levels of emotional awareness suggests new techniques for improving assessment of conscious emotional experience and psychological mindedness. Lane and Schwartz (1987) maintain that this type of assessment of conscious experience may provide an alternative to the clinical concepts of repression and other unconscious defense mechanisms. This cognitive-developmental continuum may have implications for

selecting treatment modalities on the basis of nature of patient's level of emotional awareness.

Based on this theory, Lane, Quinlan, Schwartz, Walker and Zeitlin (1990) developed the "Levels of Emotional Awareness Scale." The LEAS presents evocative interpersonal situations and elicits descriptions of emotional responses of self and others. These items are scored using specific structural criteria. In Lane, et al.'s (1990) initial study of forty undergraduates, the results showed that the LEAS correlated positively with openness to experience and emotional range, but not with measures of specific emotions, or the number of words used in the LEAS responses (Lane, et al., 1990). The researchers conclude that the lack of correlation with emotion scales demonstrates that it is the level of emotion not the specific quality of emotion that is tapped by LEAS. Lane, et al. (1990) develop their argument further by saying that "the lack of correlation between the LEAS and the number of words used in the LEAS responses indicates that complexity is not equivalent to simple verbal productivity" (p.131).

In regards to his work on levels of emotional awareness, Schwartz (1990) emphasizes that the higher levels are not necessarily "better" than the lower levels. Individuals may vary in their characteristic level of emotional awareness, as well as in particular areas in which the lower-level emotional processing and expressing take place.

This theory sheds new light on the phenomenon of alexithymia. Lane and Schwartz (1987) conceptualize the alexithymic's emotional experience as undifferentiated. This "undifferentiated" nature of emotional experience, which is similar to defensiveness, is described by the authors as "self-perpetuating to the extent that the alexithymic

individual avoids reflecting on and generating symbolic representations of experience. Our model suggests that an important reason for this avoidance is that unpleasant emotional arousal is experienced as overwhelming somatic distress when it is attended to" (p. 140).

Alexithymia would then be viewed as one stage of a developmental continuum rather than as a distinct entity (Lane & Schwartz, 1987). The question remains whether this is a global developmental process or involves different skills related to different modalities (e.g. verbal versus nonverbal) - as has been found to be the cases for Piagetian stages - or even is specific to certain emotions.

Repressive Coping Style

Repression is not only at times adaptive, but may also actually function as a prerequisite for an individual's health (Lazarus, 1966; Weinberger, Schwartz, & Davidson, 1979). Individuals who use repression as a coping skill demonstrate "difficulties in experiencing specific negative emotions as well as specific positive emotions, thinking about certain issues in a nonthreatened, nondefensive manner, and developing effective, close, loving relationships with family and friends" (Schwartz, 1990, p. 429). Schwartz goes on to argue that depending on the certain context, "the repressing of higher-order perceptions is not only essential, it is a prerequisite for health" (p.428).

This theory on repressive coping style states that if repression is viewed as a prerequisite for health, then it is possible that disease plays an adaptive feedback role in

promoting health and well-being (Lazarus, 1966; Schwartz, 1990).

From this viewpoint, a personality trait of self-concealment and a tendency to suppress one's emotions may not necessarily mean that such individuals are lacking self-awareness or are unable to be introspective. Thus, in assessing psychological mindedness in an individual, considering the possibility that one may be manifesting a repressive coping style rather than lacking psychological mindedness, may influence both the assessment and treatment processes.

Levels of Thinking

Psychological mindedness can also be conceptualized using Pennebaker's (1989) model of levels of thinking, where the thought processes are related to the stream of consciousness. The levels of thinking are rated along a five-point scale, 1 representing the low level of thinking and 5, the high level. "High level thinking" is associated with self-reflective thoughts and reference to one's emotions and moods. Low level thinking is characterized by a total lack of self-reflection and no awareness of moods (Pennebaker, 1989). Low level thinking "can partially blind individuals to coping strategies that require the use of emotionally laden or broad forms of information" (Pennebaker, Czaijka, Cropanzano, Richards, Brumbelow, Ferrara, Thompson, & Thyssen, 1990, p. 755).

Individuals who adopt low-level thinking are engaged in ignoring unwanted thoughts or environmental stimuli. Therefore, the personality construct that is associated with low-level thinking is similar to that of the repressive coping style (Schwartz, 1990). Separation of verbal and physiological indicators of discomfort characterize low-level

thinking. An individual may choose to ignore and/or deny the physiological effects of any negative emotions that may arise from any given experience (Pennebaker, et al., 1990). The levels of thinking theory is to some degree another way of reframing denial, which relates to low-level thinking and obsessive rumination of conscious thoughts, similar to high-level thinking.

Pennebaker (1989) claims that there are three significant interrelated dimensions of thinking that transform during a stressful situation: the breadth of perspective, self-reflection and awareness of emotion. In addition, Pennebaker (1989) suggests that cognitive deficits can be examined among individuals with major clinical disorders that indicate low-level thinking, like alexithymia. From this viewpoint, alexithymia stems from active efforts to exclude upsetting thoughts about traumatic experiences from consciousness, leading to a lack of self-awareness.

An important note made is that chronic high-level thinking, like chronic low-level thinking appears to be objectively unhealthy. High-level thinking is associated with greater psychological distress but less physiological costs, as opposed to low-level thinking. "Low-level thinking...serves as a psychological Band-Aid with potentially damaging physiological costs" (Pennebaker, 1989, p.346). Moderate thinking levels are associated with better psychological and physical health. The health consequences of levels of thinking depend on the specific demands of the situation. Where "active coping" is necessary, high level thinking is most effective, and when no possibilities exist for changing a given situation, low level thinking may be useful (Pennebaker, et al., 1990).

Attributional Style

Psychological mindedness can also be conceptualized and measured in terms of attributional style. Attributions are defined as "cognitive or conceptual links between experiences or events and knowledge structures that function as labels, categorizations and interpretations of events" (Kirmayer, Young, & Robbins, 1994, p. 584).

Robbins and Kirmayer (1991a) present the hypothesis that there are individual differences in patterns of attribution for common physical symptoms. The authors make a distinction between attributions of the cause of illness and attributions of the cause of symptoms. Symptoms may occur before professional diagnosis is made. Thus, causal attributions of unlabelled symptoms may be more predictive of initial illness behavior than are attributions of illnesses.

The three attributional styles they tested involved psychological, physical, and normalizing explanations for somatic symptoms. Robbins and Kirmayer (1991a) found support for the notion of enduring attributional styles. Symptom schemata are influenced by past illness experience, as well as a broad range of factors including medical and cultural knowledge (Robbins & Kirmayer, 1991a). Attributional style was identified with specific patterns of symptom reporting and clinical presentation (Robbins & Kirmayer, 1991a).

People who attribute distress to emotional causes are generally viewed as more psychologically minded. From the perspective of attributional style, people considered alexithymic might present clinically with high levels of somatic symptoms due to a tendency to attribute bodily sensations to illness. Alexithymia could also involve a lack

of psychological attributions for somatic symptoms.

This theory may have significant implications for the area of psychological mindedness because it underlines the importance of considering the variations in modes of expression and those unlabelled symptoms, or those that are not verbalized. Moreover, attributional styles play a crucial role in expressive modes, as emotions affect bodily sensations, which in turn influence attributions.

Somatization

Somatization refers to the presentation of physical symptoms without evidence of any physical or organic disease (Kirmayer, 1984). Patients are considered somatic when they "present clinically with exclusively physical symptoms despite demonstrable psychosocial problems or emotional distress" (Kirmayer & Robbins, 1991, p.1). With alexithymic individuals, somatic sensations are attributed to somatic illness rather than to emotional or interpersonal conflict. Along with repressive coping style and attributional style, alexithymia is also considered as influencing the amplification of somatic symptoms (Kirmayer, Robbins, and Paris, 1994).

The concept of somatization is relevant to our understanding of individual and cultural variations in the expression of distress (Robbins & Kirmayer, 1991b). In different cultures, there may be widespread use of somatic symptoms in cultural idioms of distress, not necessarily suggesting psychopathology. There may exist "common modes of communicating and commenting on a wide range of social and personal predicaments through calling attention to bodily distress(...)" (Kirmayer et al., 1994, p.133).

A study conducted by Escobar, Burnam, Karno, Forsythe and Golding (1987) found that age, gender and ethnic background, as well as the presence of a psychiatric diagnosis, notably influenced the number of somatization symptoms. With older Hispanic women, for instance, there is the belief that emotion is an indication of weakness and thus, they are less verbally expressive of emotions (Escobar, et al., 1987). Escobar, et al. (1987) explored their findings in relation to the level of acculturation and found that the older Hispanic women with low-medium levels of acculturation had higher somatization scores than those in other groups. Angel and Guarnaccia (1989), in their study on somatization among Hispanics, show that although they are not afraid of expressing emotional distress, there is a stronger tendency and willingness to talk about their body.

Chapter 3 - Cross-cultural Considerations on Emotion and Psychiatric Constructs

The underlying theoretical argument of this research is that there is a strong relationship between culture, psychological mindedness and therapy. The significant connection between these three constructs implies that people express and define themselves in diverse ways, they use different vocabularies. It is a prevalent expectation within Western-cosmopolitan society that people can describe themselves in certain ways using a specific vocabulary, especially when engaged in psychotherapeutic treatment.

The body, illness and pain experiences are affected by emotions and they are projected in images of both the well and poorly functioning individuals (Scheper-Hughes & Lock, 1987). Understanding how emotions and each individual's communicative style are culturally influenced should be a priority in both the assessment and treatment processes. In this section I will present some current perspectives and research studies on the cultural specificity of emotion relevant to the present research. The cross-cultural considerations of psychiatric constructs will also be addressed. Emotional expression is highlighted in all the constructs of psychological mindedness, as previously discussed, playing either an explicit or implicit role. A comprehensive framework on emotions adds to a more developed understanding of psychological mindedness.

Emotions: Are they innate or learned?

The nature versus nurture controversy continues to generate debate within the

theory of emotions, as social scientists have attempted to answer whether emotional experiences are universal or culturally specific. Dichotomies such as nature and culture, mind and body, materialism and idealism, are central to theories of emotions (Lutz & White, 1986).

Scheper-Hughes and Lock (1987) remark that there is a "division of labor" among social scientists in the area of emotions. On one side, the psychiatrists and psychoanalysts have conceived of emotions as innate drives, impulses and instincts, while social anthropologists have viewed emotions as learned entities affected by cultural experience. Scheper-Hughes and Lock (1987) claim that the Cartesian legacy of mind-body dualism is reflected in a distinction between cultural "sentiments" and natural "passions."

Universalism - The biological perspective

In his analysis of emotional expression of humans and animals, Darwin (1872) originally claimed that emotional responses, specifically facial and vocal expression, are innate and universal for discrete emotions, like joy, sadness, anger and fear. Ekman (1984), a prominent theorist of the biological perspective, accepts Darwin's view that facial expressions of emotion have evolved and are universal in humans because they are part of our biological inheritance. In addition, Ekman believes that emotion can be traced phylogenetically.

In his research, Ekman (1984) analyzed ten characteristics of the boundaries of emotion, including pan-cultural signals, phylogenetically traced facial expressions, emotional expression involving the voice, limits of the duration of emotion, the emotion's

intensity and inhibition, pan-human commonalities in elicitors and changes in the autonomic nervous system and the central nervous system for each emotion. In one series of experiments, Ekman showed photographs of facial expressions to observers of five different cultures and asked them to identify from a list the emotion they saw. The results were that the people from the five cultures gave the same interpretation of each face. Ekman concluded that happiness, surprise, fear, anger, disgust, and sadness are universal emotions, expressed with the same distinctive configuration of facial muscle movements.

Izard (1971, 1977) had preceded Ekman in this specific research area, and Ekman had repeated Izard's research with photographs and he obtained similar results. Izard's (1971, 1977) experiment used different photographs of facial expressions and a somewhat different list of emotion terms. Izard (1971) believes that the experiential component of an emotion such as anger is a quality of consciousness or feeling, which is invariant across cultures. Both Ekman and Izard, as universalists, argue that "emotions have innately stored neural programs, universally understood expressions, and common experiential qualities" (Izard, 1977, p.18). Thus, the essence of emotion within this perspective remains as an affect program that directs cognitive responses (Ekman, 1984), which essentially is a biological system. In other words, both Izard and Ekman argue that cognition is directed by affective states.

Mesquita and Frijda (1992) criticize Ekman's research on recorded facial expressions because they only represented a small portion of emotion-eliciting conditions. Fridlund, Ekman and Oster (1987) do suggest that more data is needed, however, as they note, "detailed measurement of the facial expressions occurring in more than one

circumstance in different cultures, as well as knowledge of each culture's display rules, are not available for even one culture" (p. 161).

The study of facial expressions, which is a primary means of emotional communication, provides an interesting route for the examination of alexithymia. It would be expected that alexithymics would demonstrate disturbances in this function. McDonald and Prkachin (1990) designed a study that focused on the expression and perception of facial emotion in alexithymia. They isolated components of emotion in which individuals assessed as alexithymic and non-alexithymic differ. These authors hypothesized that alexithymia would be associated with deficits in registration, processing and the expression of emotion. Alexithymics were expected to give lower ratings of the emotional impact of provocative slides, to be poorer at recognizing expressions of emotion in others, and show deficits in spontaneous and deliberate expression of emotion (McDonald & Prkachin, 1990).

The results showed that alexithymics were proficient at posing facial emotion and accurately identifying emotional stimuli. McDonald and Prkachin (1990) claim that alexithymics do have the cognitive representation of affective information and they respond appropriately to linguistic conventions regarding emotion. What appears to be primarily affected in alexithymia is the connection between affectively relevant experience and interpersonal communication of that experience. McDonald and Prkachin (1990) conclude that "alexithymia may simply be an extreme example of limited expressivity rather than a fundamentally distinct characteristic" (p. 207).

Culture specificity - The cultural viewpoint

As social constructions, emotions accentuate aspects that are closely related to social environment and culturally specific ways of thinking and talking about emotions. In many societies, emotions are a critical link in cultural interpretations of action, which presupposes that emotion concepts are likely to be actively used in the negotiation of social reality (Lutz & White, 1986; Mesquita & Frijda, 1992).

Scheper-Hughes and Lock (1987) suggest that emotions provide a missing link between mind and body, individual, society and body politic, insofar as emotions involve both feelings and cognitive orientations.

Levy (1984) also believes that the expression of emotions and circumstances arousing particular emotions vary culturally. Levy considers emotion in relation to the cultural structuring of knowing. He coined the terms "hypercognition" and "hypocognition," referring to tendencies of cultures to variously elaborate (hypercognition) or mute (hypocognition) conscious recognition of particular emotions (Lutz & White, 1986; Levy, 1984). The concepts of hypercognition and hypocognition are similar to levels of thinking that were described earlier, where hypocognition relates to low-level thinking and hypercognition to high-level thinking. Levy (1984) claims that an excess in either direction is not healthy; a balance between the two may be ideal.

Within a dramaturgical perspective, Rosaldo (1984) argues that society shapes the self through the medium of cultural terms. Rather than considering feeling as a private realm that is both universal and particular to the self, Rosaldo believes that it is more sensible to view emotions as cognitions, embodied thoughts. In this view, culture makes

a difference that concerns not only what we think but how we feel about and live our lives. Emotions are interpretations that are "always culturally informed, in which the actor finds that body, self, and identity are immediately involved" (Rosaldo, 1984, p.141). Abu-Lughod and Lutz (1991) believe that emotions are an embodied practice rather than an embodied thought. In this view, emotions are perceived as discourse and like thoughts, they have an inherent structure.

Placing emotions in a cultural perspective promotes a better understanding of emotional expression, emotional experience and symbolization. Culture is embedded in all areas of emotional expressivity, which are also affected by the biological component. The social elicitors of emotion vary cross-culturally (Janzen, 1978; Scheper-Hughes, 1985; Lock, 1980) and so, it is crucial that clinicians explore the sociocultural context critically. How emotions are expressed, experienced and given form through symbols have a direct effect on the evolution of psychiatric problems, which in turn are affected by specific cultural processes (Kleinman & Good, 1985). The cultural perspective is crucial for proper interpretation of forms of psychopathology and psychological healing among non-Western groups as well as for the psychosocial care of patients within the Western biomedical system (Kleinman & Good, 1985; Littlewood, 1992).

Among the studies comparing emotional patterns among different cultural groups, Marsella et al. (1973) identified and compared patterns of depressive disorders among Caucasian, Chinese and Japanese American college students. The results showed that somatic symptoms were more characteristic of the Chinese, while existential symptoms dominated the patterns of the Japanese and Caucasians. The authors contend that

symptoms are related to extensions of the self which are conditioned by the culture and socialization experiences. In addition, Marsella et al. (1973) note that it is important to take into account the role played by individual differences, stress and cultural definitions of disorder in determining the expression of depression.

Lesser (1981) and Kirmayer (1987, 1989) are among the few researchers who have touched upon the cross-cultural considerations that are crucial to establish the validity of the concepts of alexithymia and psychological mindedness. These concepts, derived from the psychoanalytic perspective, are clearly influenced by Western philosophy and thought. The prevalent value judgement among the researchers and clinicians in this particular field of interest as well as in others, is that verbal expression of emotions is healthy and mature. The crucial consideration that would affect the clinical assessment and treatment process is that this expectation or judgement of unexpressed emotions being unhealthy is ethnocentric, and it does not necessarily conform to the norms in other cultural settings, such as the Chinese (Lesser, 1981).

The expressive verbal style of therapy masks people's true variability, as it does not take into account forms of expression, other than the verbal mode. It also reflects the culture-wide tendency to use verbal modes of expression. However, expressive style is dependent on culture and social context. "The extraversion of American culture leads us to put more emphasis on the said than the unsaid or unsayable in psychotherapy" (Kirmayer, 1989, p. 242).

Cultural concepts of the mind, self and person vary widely, as does the process of treatment in psychotherapy (Kirmayer, 1987, 1989). Moreover, the influence of the

social context on emotional expression, and how emotion is expressed and regulated internally varies cross-culturally. Expressive psychotherapies have not been widely adopted by cultures outside of the Western world and self-awareness is used for different ends (Prince, 1987; Kirmayer, 1989). Some of the reasons for this, as outlined by Prince (1987), include the following: the lack of presence of psychological mindedness, introspection, shame over acknowledging psychological difficulties, a reluctance to speak of family problems outside the family, and cultural notions about causes of psychiatric disorder rarely include psychological causes.

The expectation that emotion must be verbally expressed has unfortunately led some researchers to conclude that the non-Western cultures that do not follow this pattern are deficient in their ability to verbally formulate and symbolize emotion (Leff, 1973). Rather than developing a culturally sensitive framework, inappropriate value judgements are made and words like "a loss" or "a lack of" are used in regards to concepts that basically do not exist in other cultural settings. As Prince (1987) sets forth, it is important for researchers to reconsider the use of alexithymia as a label for individuals who come from cultures where reticence or silence is a more desirable communication style. Taylor (1987) argues against this position by saying that alexithymia is not about the discharge of emotions but rather an inability to tolerate affects and derive information from them. If this is so, then the problem remains with the measure of alexithymia, which explains verbal articulation of emotion, fantasy and related experience.

Researchers in psychiatry may use the alexithymia construct to re-assess the relationship between culture and healing because it demonstrates the Western culture's

fixation with the verbal mode of emotional expression (Kirmayer, 1987). Kleinman (1977) and Marsella, Kinzie and Gordon (1973) note that in Eastern cultures, with regards to the expression of emotions and psychiatric illness, verbalization of affect is not common. It is also essential to consider the way in which disease models and psychic distress are shaped by culture. How relevant would the construct of alexithymia be in cultures where unexpressed emotions and/or expression of distress are inappropriate.

McDougall (1985) claims that in Western cultures the psychic image of the body itself is made and enslaved by words. "It is what we have done with the words, how well we use them to communicate with ourselves and with others, that determines what kind of human beings we have become - and what kind of psychoanalytic experiences await us" (McDougall, 1985, p. 178). When no words are used, one is labelled as alexithymic and thus, considered as a poor candidate for psychotherapy.

Alexithymia should be viewed in the context of communication. Patients in psychotherapy who are from a culture where discussion of family or personal matters with outsiders is unacceptable will be reticent about the expression of emotions (Kirmayer, 1987). Research needs to focus on comparing patients from various backgrounds, along the alexithymic dimension, as well as looking at cultural variations in emotions, as previously discussed.

Chapter 4 - Imagery, Art Expression and Art Therapy

Images and art expressions may be important nonverbal modes of symbolizing and expressing emotions. Culture may greatly influence this process of nonverbal symbolization and expression. Metaphors, narratives and imagery in psychotherapy and art therapy are alternatives to the emphasis on verbal in the notions of psychological mindedness. This chapter will discuss some links between imagery, art expression and art therapy relevant to the present study. The relationship between mental images and artistic constructions or embodiments will be described. A separate section on cultural influences on imagery, art expression and art therapy will also be presented. These three constructs are related to the issue of emotional expression and I will demonstrate how they may be influenced by alexithymia. I will initially present definitions of the concepts of imagery, art-making and art therapy, and later, illustrate how the dimensions of psychological mindedness are relevant to each of these domains.

Imagery

The interpretation of mental imagery has long been a cornerstone of psychoanalysis. As Mitchell (1986) outlines the psychoanalytic viewpoint:

> For Freud, psychoanalysis is a science of the "laws of expression" that govern the interpretation of the mute image. Whether that image is projected in dreams or in the scenes of everyday life, analysis provides the method for extracting the hidden verbal message from the misleading and inarticulate pictorial surface (p.

45).

The emergence of metaphors, narratives (Kirmayer, 1993; Kleinman, 1988) and image formation in psychotherapy (Horowitz, 1983) have helped enhance the psychodynamic understanding of an individual's affective states and personal experience.

Narratives, metaphors and images are used to help make sense of one's world. Metaphors are linguistic expressions that are part of a person's conceptual system and they involve understanding and experiencing one kind of thing in terms of another (Lakoff & Johnson, 1980). Metaphor acts as an intermediary linking narrative and bodily-felt experience through imaginative constructions (Kirmayer, 1993). Narratives, which are stories or constructions of personal experience, have long been central to psychoanalysis and they are used as a framework to understand illness experience (Kleinman, 1988). Dennett (1981) describes images as distinct from other representations in that they represent something that has in common, at least one characteristic of the shape, form and color with what it is symbolizing or representing.

Finke (1989) proposes a "working definition" of imagery, which states that it is a mental invention or recreation of an experience that resembles the experience of the perception of an object or event and it may or may not be connected with direct sensory stimulation. Both Schwartz (1981) and Hillman (1977) treat imagery as a kind of symbolization. Images have symbolic functions that play a role in describing, depicting, or representing objects and/or relationships, and images can be approached and understood via symbols and vice versa (Schwartz, 1981; Hillman, 1977). In turn, symbols within images can function alone as meaningful entities, and as Gardner (1983)

describes them, "symbols pave the royal route from raw intelligences to finished cultures" (p.300).

Horowitz (1983) explains that the goal in psychotherapy is to reestablish continuity between ideas and attitudes in various modes of representation. Image formation may be used intentionally to transform emotions, especially in relation to images that help access repressed mental contents. Repressed memories or fantasies often surface in the form of image representation, and in psychoanalytic theory, visual images are often tacitly considered to be the characteristic mode representing deep, unconscious thoughts (Horowitz, 1983). Imagery techniques used in psychiatry to help capture the preverbal, thinking in pictures, are regarded as a worthwhile addendum to a clinician's diagnostic-therapeutic armamentarium (Kosbab, 1974).

The pictorial surface may not always be "misleading and inarticulate," as Freud believed (Mitchell, 1986). In fact, metaphor, images, and narratives may lead one to a clearer understanding of the latent, unspoken message. At times in psychotherapy, graphic art productions may offer a meaningful alternative to verbal interactions. Many images cannot be labelled with words, yet their message can be effectively conveyed through art.

Art expression

"...paintings gain their power not from the ideas they express, but from their ability to express them - their capacity to communicate" (Layton, 1991, p. 98-99). Art expression is the product of the imagery process and creativity. Art is the

execution of imagery, the form of communication used to express inner imagery to others. Art expressions are images with a physical existence, such as poetry, paintings, drawings, photographs or music. Mental images, stemming from memory, imagination and/or dreams play a role in the process of producing art expressions. It may be easier to talk about or describe art expressions because of their physical, tangible appearance, than it is to talk about mental images.

In art expressions, private images in the mind are embodied using tools of the art media. Art products, like mental images are not necessarily pictorial in nature, they could also be musical and at times verbal (Goodman, 1990). Art expressions combine the verbal and the nonverbal domains of mental imagery, as one may look at an art product and choose to talk about its theme or not. Art does create a common ground where both verbal and nonverbal encounters occur. In our Western-cosmopolitan culture, one always tends to look for distinct metaphors, symbols in a piece of artwork, their primary intention being to discuss them on a verbal level. We talk about the content, the figures, and we focus on the title, if there is one.

We have the tendency to look at artwork and equate the content with conscious thought, and thought that we can express in words (Layton, 1991). However, the underlying meaning or latent content in artwork may not be easily or consciously grasped, because it may symbolize unconscious elements. Nevertheless, the interpretive process in the expression of art, the need or desire to make what is essentially nonverbal, verbal is a significant aspect of the Western cultural experience. Goodman (1976) eloquently describes this experience and places it in perspective:

> Pictures are no more immune than the rest of the world to the formative force of language even though they themselves, as symbols, also exert such a force upon the world, including language. Talking does not make the world or even pictures, but talking and pictures participate in making each other and the world as we know them (p.88-89).

Interestingly, art can be understood without words yet words usually cannot be perceived without mental representations. Historically, writing in an alphabet was not totally independent of pictorial elements (Layton, 1991). Art is not an equivalent to mental representations and representations are not equivalent to pictures. As artists create images poets too make images using words, yet the artist's language may not be as explicit as the poet's (Nemerov, 1980).

Cupchik (1988) reviews nonverbal communication in paintings through three different viewpoints: ancient, traditional and 20th Century. The ancient perspective stresses art's potential for evoking emotions through symbolism. The traditional approach focuses on expression of emotions by figures depicted in a painting. The 20th Century viewpoint emphasizes expression in the artwork of the artist's inner thoughts and feelings. In the art-making process there is an unconscious display of emotions (Cupchik, 1988).

The emphasis on the essence of the aesthetic experience as apprehending the hidden message fails to show the unique quality of art (Winner, 1982). Winner (1982) argues that an understanding of the reasons people so eagerly seek aesthetic messages is essential. Drawing from the Darwinian tradition, Winner presents a view of the function

of art as adaptation emphasizing how it contributes to human survival and evolution. Art and the art-making process are essential tools that promote adaptation and personal growth. Winner (1982) also outlines other theories, one being how art has long been viewed as therapeutic, from the time of Plato and Aristotle to the Freudian era.

Along the same line of an evolutionary theory of art, Dissanayake (1988) stresses that life and art are integrated in forms of art expression. Art is viewed as a fundamental behavioral activity, as it sharpens the powers of discrimination, conveys important messages that are memorable because of their aesthetic package and helps develop self-assertion (Dissanayake, 1988).

Cupchik (1988), Winner (1982), and Dissanayake's (1988) theories illustrate how artistic expression is not an oddity, luxury or extraneous element but central to human development, and that artistic expression may serve many of the same functions as linguistic expression.

Art psychotherapy

Art psychotherapy is a relatively new field that was initially developed as an adjunctive form of therapy, used in conjunction with other more classical forms of psychotherapy. Naumburg (1950) pioneered in this area, using the art expressions of her clients to better understand their psyche or personality. Kramer (1971), also a pioneer in art as therapy, focused more heavily on the art-making process, specifically during the session, which she viewed as therapeutic and a significant part of the healing process. In addition, Kramer considered teaching art techniques to the client as therapeutic in the

sense that it could lead to sublimation and perhaps, an increased sense of self-worth.

At present, art therapists have developed eclectic styles, resulting in a creative psychodynamic process between patient and therapist, and/or artist and facilitator. Art therapy involves the witnessing of the artistic engagement between creator and medium and the symbolization of emotion in the form of an object. The art therapist facilitates the interpretive process, helping the client make sense of his emotions, his inner world, which are either being tapped into, uncovered or expressed in his artwork.

Emotional experience may generate the art idea that is worked with, out and through, resulting in a symbolic form (Agell, 1989). Art therapy allows for a meeting ground of the body, mind and soul, bringing together inner and outer worlds, in a way different from verbal psychotherapies.

In the art therapeutic milieu, metaphors of one's self may be identified, accepted and/or transformed. The specific elements of an individual's inner world are known by different thoughts and emotions and are suggested by many inner images. The primary role of art therapy is to give these inner elements an outer form, thereby enhancing the unfolding and encouraging the subsequent healing process.

The inherent nature of art is its capacity to contain many levels of thought and affect, to make something internal to the self into an external form, is understood to be essentially therapeutic. The art therapeutic experience is designed to encourage individuals to translate how and what they sense from their subjective world into outer objective form (Langer, 1964). Whether on paper, or in a more plastic form, thoughts and emotions become contained - they are held within a physical and psychological

frame, symbolized in the product. In art therapy, the most basic objective is to materialize inner experience, and develop new ones. Thus, art in art therapy is considered to be a tangible, visual container of one's self.

The process is a creative one; it is a way to seek for something that may be lost inside oneself or to attend to the unique in the familiar. The individual's inner world opens up to the many-faceted visual symbols that result from the image-making process. This process may at times tap into unconscious material, which materializes into symbolic form. Symbols are understood as significant healing mechanisms, especially within the interpretive process, as they are used by the art therapist to delve deeper into an individual's inner world and to suggest ways of healing. Both the symbols that emerge and the process of symbolization, that is, understanding and integrating the symbols by relating them to personal experience, have healing qualities.

Art, as a form of emotional expression and symbolization, can also be a way to attempt to make sense of both the external and internal worlds. The art process allows one to objectify subjective experiences and subjectify objective experiences, each being impregnated with feeling (Langer, 1964). Conscious, preconscious and/or unconscious material surfaces and becomes an object, sitting at a distance from one's self, thus objectifying experience and so, being open to dialogue between patient and therapist. If an individual talks about a human figure in his drawing in the third person, when this figure may actually represent himself, he is objectifying a subjective pictorial encounter. This is also an example of personification and the use of "shifters," which relates to the making of a nonhuman figure that is acknowledged as a part of the self by referring to

it in the third person instead of the first person, when talking about the picture. An example of "subjectifying" an objective experience is relating to actual photographs by projecting one's feelings and identifying with the symbols represented in the photographs.

The expressive elements of personification and shifters are used either directly or indirectly by the therapist (i.e. either the therapist decides to explicitly link the symbols to the self or remain in the third person viewpoint), to promote dialogue between patient and therapist. Dialogue implies the possibility for interpretation and this facet of the healing nature of art comes into play when interpreting the artwork. In art therapy, interpretation is primarily based on the client's own explanations or translations of the artwork, the client's behaviors while creating, and his or her history and cultural background.

While interpretation can be an intuitive process for art therapists, they must guide their intuition by focusing on the literal and symbolic content in the artwork, the medium the person chooses for expression, and how the medium or materials are manipulated. Most important, the art therapist needs to consider the creator's interpretation of what he perceives as his message (Rhyne, 1984). Thus, in making a single interpretation, the art therapist must use the client's individual mosaic as a framework. The client's individual mosaic includes his culture, personal background and his own interpretations of his artwork.

Links with concepts of psychological mindedness

As illustrated above, the art therapy process promotes both the nonverbal and

verbal symbolization of emotion, where the facets of images, art expression, emotional expression and interpretation of the art product all play significant roles. There are parallels between stages of artistic development and aspects of the art therapy process and notions of psychological mindedness. The structural transformation that occurs in the levels of emotional awareness also occurs in the art development. When giving form to mental images and creating art, the process often involves sensorimotor reflexive or bodily sensation as in the kinaesthetic, scribbling stages of artistic development (Lowenfeld & Brittain, 1987). This process is similar to the initial levels of emotional awareness. In the interpretive process in art therapy, the client is encouraged to move towards awareness of blends of feelings, or blends of blends of feelings.

Low-level thinking may occur when one is engaged in kinaesthetic, scribbling or spontaneous art activity, where one may be less self-conscious and self-reflective. High-level thinking is associated with self-reflective thoughts, which occurs in later stages of artistic development and may also become a significant part of the interpretive process in the art therapy experience.

In relation to the repressive coping style construct, at times art is used as a repressive coping skill to keep anxiety-provoking memories or feelings out of consciousness. At other times, art and/or the art-making process may elicit anxiety and create a threatening experience, as it may uncover conflictual feelings. Art tasks often involve regression to the scribbling stages or other earlier phases in artistic development. A client in art therapy is often encouraged to regress in order to get in touch with emotions that have been repressed or to connect with childhood memories. Drawing,

painting, sculpting when performed in a relaxed, loose fashion as compared to a constricted, controlled manner, may tap into unconscious thoughts or feelings.

In terms of alexithymia, in the initial stages of artistic development, the art products manifest a focus on the external world, especially when schemas or stereotypes are developed. There may be during these early stages a paucity of fantasies and a lack of introspection, yet this gradually develops in later stages. Also, symbolic processing emerges in later stages of artistic development. In art therapy, a treatment goal with those who manifest restricted imaginative processes would be to initially develop the skills that may already be present, for instance they may be in the scribbling, disorganized stage, and to later encourage them to gradually begin to use form and color to express themselves in a more organized, less chaotic fashion.

Individuals who are considered alexithymic report few dreams and have a lack of fantasies. "When dreams are recalled they either contain explicit archaic mental content or...lack...color, bizarreness, and symbolism..." (Taylor, 1984, p. 726). Symbolic processing, which imagery and image-making is a part of, is also claimed to be a generalized deficit in alexithymics (Sifneos, 1973). Art is a relevant issue in relation to alexithymia because of the alternative approach it provides to the domain of symbolic processing. In regards to the research question of this study, a consideration that arises is whether or not there is a global relationship between verbal expression and art-symbolic expression, which can be approached from the psychological and social perspectives.

In terms of the psychological perspective, what should be considered is whether

the symbolic processing in verbal expression and in art expression is the same or different. If it is the same, then it is assumed that it is affected in the alexithymic. If it is different, then this means that different skills are being addressed. In other words, an individual may have trouble talking about feelings, yet may find it easier to express himself through pictures or other forms of art. It may be appropriate to draw feelings but not express them verbally. What is occurring is some kind of differentiation of skills or functions.

The social argument in regards to verbal and art expression is that in one sense these may be used in the same way or in different contexts. Moreover, one form of expression may be discouraged while the other is encouraged. This lends itself to cross-cultural analysis, where there may be a culture where verbal and art expression are encouraged, or discouraged, which may lead to the assumption that there will be a higher correlation with alexithymia. The Cree for instance appear to have a society where verbal expression is discouraged and art is more encouraged (Speck, 1977). Pictorial representations play a bigger role and there is less prohibition to express oneself through art in Cree society. The issue that surfaces here is whether people look alexithymic or not because different channels of expression are being used; that is, the concept that is important to consider is "pseudo" alexithymia. The Cree may appear alexithymic because verbal expression is discouraged, however, if pictorial measures of alexithymia are used with the Cree, they may detour prohibitions and go beyond "pseudo" alexithymia, as art is an acceptable form of communication.

A recent study that implicitly addresses the concept of pseudo-alexithymia,

investigated the effect of alexithymia upon a person's art production (Heiman, Strnad, Weiland & Wise, 1994). Along with the TAS measure, patients were asked to draw their "illness," and the artwork was rated as concrete, abstract, combination of the two, or symbolic. Researchers hypothesized that those who would score high on TAS would draw using concrete imagery, use three or fewer colors and draw human figures. The findings refute the hypotheses as the patients with high TAS scores were able to abstract and use three or more colors.

Heiman et al.'s (1994) study presents several limitations. For instance, the majority of the sample had a mood disorder, which influenced the imagery that surfaced and also, the categories of the artwork may have led to bias due to the researchers making value judgements on the artwork. What makes an image concrete, abstract or symbolic? What may be abstract or concrete to one observer may not be to another. Nevertheless, this study highlights an interesting point in relation to the concept of pseudo-alexithymia. All the patients including the alexithymics were able to graphically communicate their illness. This suggests that alexithymics may not manifest a global deficit in symbolic functioning and/or may feel more comfortable or able to express themselves pictorially than verbally. Perhaps they may appear alexithymic only when verbal measures are used. The authors conclude that "art therapy can be used successfully with alexithymics to promote exploration of emotions.(...) Art therapy offers a richly symbolic visual means for alexithymics to begin to express, recognize, and discuss feelings within a supportive setting" (Heiman, et al., 1994, p. 145).

Cultural influence on imagery, art expression, and art therapy

> ...each culture has its own "logos" or distinctive mark that acts as a catalytic force or deterrent to the development and expression of creativity. It is because of this logos that cultures differ in the particular activities which they encourage, stimulate and value (Ludwig, 1992, p.463).

Culture also becomes a highly relevant issue because of its influence on creativity, imagery and art expression. Culture exerts a profound effect on creative expression by influencing what is expressed, how it is expressed and by whom it is expressed, as each culture tends to define its appropriate outlets for creative expression (Ludwig, 1992).

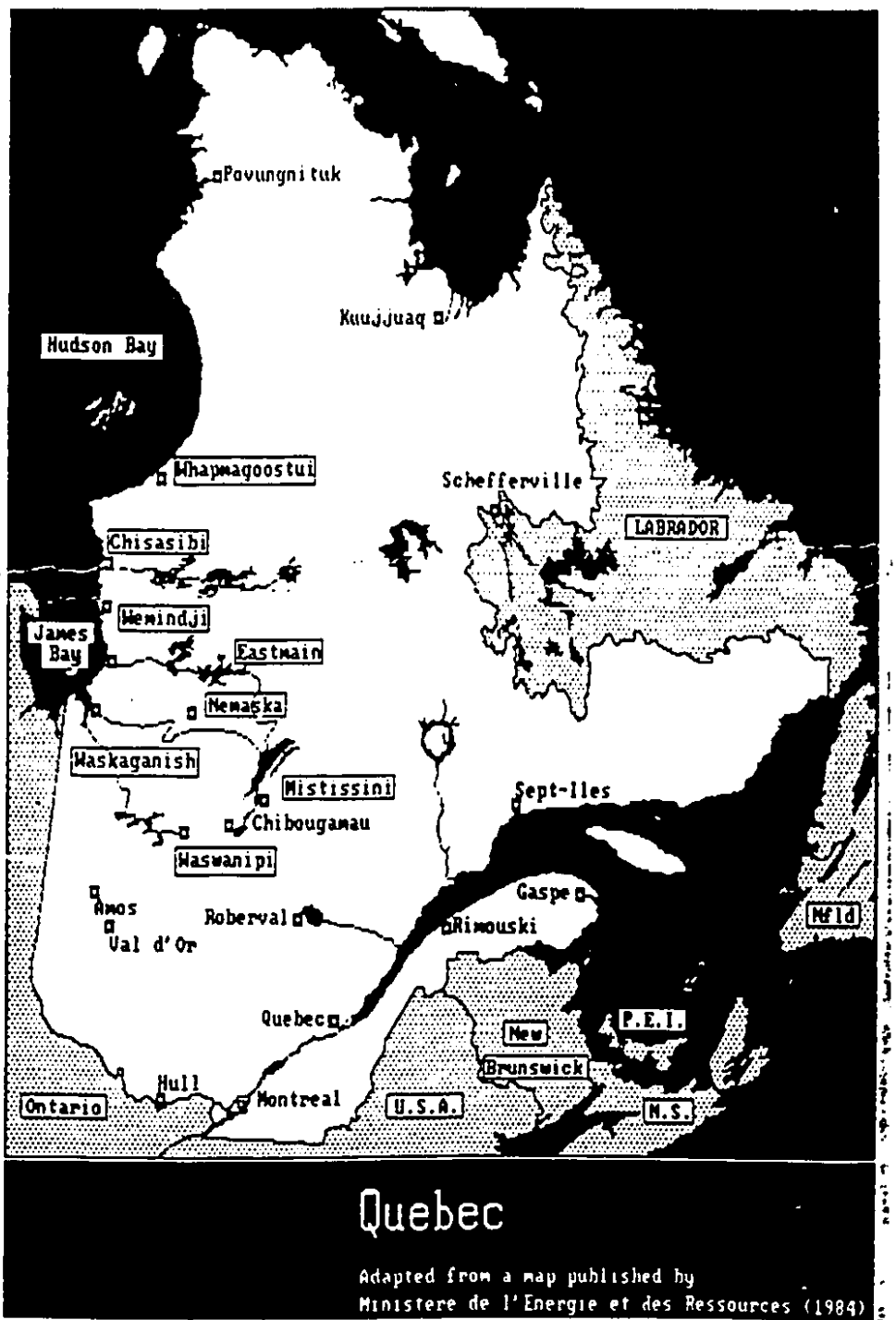
The processes of imagery and creative expression are shaped by social interactions and they obtain their form in and through cultural transmission (Whitten & Whitten, 1993). In every culture there are certain occasions where image-making and/or creative expression is allowed.

Goodale and Koss (1967) studied the cultural context of the creative process among the Tiwi, an aboriginal tribe. Among the assertions these authors make, those relevant to this present study include, (a) a cultural milieu provides a particular set of contexts within which the artistic act takes place, and (b) these contexts are structured in ways to facilitate the production of traditional art forms. The contexts include the social settings for artistic activity and the verbal motivations of the artist (Goodale & Koss, 1967).

Every culture provides a creative forum in which people can express their thoughts, feelings fantasies, or dreams. The Cree and Naskapi Indians, for instance are

encouraged to engage in the art-making, creative process after receiving a vision or experiencing a dream (Speck, 1977). In some societies there is a tendency to not put this form of communication in words or language. As Witherspoon (1993) points out, in Native American societies, "art is not viewed as marginal, unessential or extracurricular. Instead art is viewed as a way of seeing the world, and a way of being in the world" (p.319). Art, imagery and dreams are all part of a sacred experience, especially for the Cree and Naskapi Natives (Speck, 1977). Although there are no restrictions on the actual making of the artwork, Speck (1977) notes that dreams and art forms are only talked about during rituals or to specific people, like shamans and family members. The dreams and the artwork have spiritual messages that may benefit the person receiving the dreams as well as his or her significant others.

In relation to the present research study, the Crees' sacred, creative forum for dreams and art-making, as described by Speck, may influence their experience of art-making in the testing milieu. For example, talking about the pictures created may be culturally inappropriate, as it may be closely linked to their sacred experience of dreamwork. This will be further developed in the following chapter on the Cree.



Quebec

Adapted from a map published by
Ministere de l'Energie et des Ressources (1984)

Chapter 5 - The Cree People

The following chapter will outline the historical and cultural context of the Cree people, with emphasis on the Northern Quebec Cree. To address my research question, I will consider emotional expression in the Cree cultural context. I will illustrate how narratives, imagery and dreams and art play a role in Cree communicative patterns. Art therapy case vignettes with the Cree will also be presented in this chapter.

The historical context of the Quebec Cree

The Quebec Cree of the James Bay area have lived in the region for at least 5000 years. They distinguish one another according to the areas they come from, and their ancestral hunting areas, the main distinctions being between the inland and the coastal people (Salisbury, 1986). There were no permanent Cree communities before the European fur trade and the Cree led a semi-nomadic lifestyle. Nomad bands, which were formed of extended families hunted for the migrating game animals.

The fur trade created a transition phase for the Quebec Cree as it brought dependence on the trading post. It also promoted conflict between their traditional type of hunting and fur trapping, and between individual trade and group solidarity. The Hudson Bay Company was established in 1670 (Frenette, 1985). The Europeans depended on the Cree for food, furs and tools, and they provided the Cree with guns and ammunition for hunting purposes (Salisbury, 1986).

The mega-hydroelectric project that was undertaken in Northern Quebec in the

1970's was a pivotal change for the Cree inhabitants of the region. It flooded large parts of their hunting territories and forced them to abandon some of their rich cultural heritage and traditional activities (Atkinson & Magonet, 1990; Richardson, 1991). The signing of the James Bay and Northern Quebec Agreement in November 1975, gave the Cree monetary compensation and created local self-government for each of the eight Cree communities. This Agreement is considered Canada's first modern aboriginal treaty and was one of the first steps taken by the federal government and by aboriginal people to establish self-government (Report of the Cree-Naskapi Commission, 1994).

With the signing of the James Bay Agreement, the Cree Board of Health and Social Services of James Bay was also established. All the communities were transformed to different degrees and, for the first time in their history, the James Bay Cree united to form a common front (Salisbury, 1986; Prince, 1993).

The ethnographic and cultural context of the Quebec Cree

In Northern Quebec, there is a total of eight communities including 9000 Cree inhabitants. The Cree villages located inland count for nearly half of the entire Cree population. The other villages are located along the coast of James and Hudson Bay. It is only within the past twenty years that the Cree began settling permanently in communities. Reasons for this resistance to sedenterization included the lack of employment in the settlements as well as the fact that they preferred their traditional lifestyle and they were experts at securing their livelihood from the land (Salisbury, 1986; Atkinson & Magonet, 1990). Although their freedom of self-sufficiency diminished

once they began living in a rigidly structured society, the persistence of traditional beliefs and ritual practices has been quite strong. This is exemplified in the continuing importance of bush life for the East Main Cree of the James Bay region (Salisbury, 1986; Preston, 1981).

In all the Cree villages in Northern Quebec, most people go to the bushcamp during the goose break in the spring and the moose break in the fall. These are significant ceremonial occasions that are continuously maintained by the Cree. Other life events that play a role in Cree society include births, deaths and marriages, which are considered as ways to reinforce the Cree community (Atkinson & Magonet, 1990). In terms of Cree religious beliefs, the Christianization of the James Bay Cree did not begin until the mid-nineteenth century, about 200 years after the establishment of the Hudson Bay Company. The Cree's religious beliefs were attacked and consequently placed aside. By the late 1960's, Pentecostalism began to spread and today, at least half of the Cree population are Pentecostals (Prince, 1993). Prince (1993) notes that some Cree regard Pentecostalism as a necessary and positive force as it has saved many from alcohol abuse and disruption in families, while others feel that it has only had negative effects on the Cree culture and society.

In regards to dealing with health problems, the Cree people use plant and animal products of the outdoors as their pharmacopoeia, as well as modern medicine (Adelson, 1992; Atkinson & Magonet, 1990). Adelson (1992) stresses how the Cree constantly express their respect for animals and nature. The Cree term, "Miyupimaatisiiu," or "being alive well," relates to "being able to hunt, pursue traditional activities, live well

in the bush, eat the right foods, keep warm, and it is the ability to provide for oneself and others" (Adelson, 1992, p.11). The Cree's concept of well-being is definitely linked to their traditional practices and there are particular foods and activities that constitute well-being. The Cree also believe in sorcery or "windigo" and it is usually implicated when the victim dreams of the sorcerer and soon after the victim or his family suffer misfortunes or illnesses (Marano, 1982). The expression "windigo" is often referred to as a cannibalistic monster or ghost that haunts human settlements (Jenness, 1977; Marano, 1982). This continuing belief in sorcery is one reason for placing emphasis on one's dreams among the Cree.

Cree style of communication

It is not the case that a man who is silent says nothing.

- Anonymous

The ethnography of communication has focused on the analysis of verbal repertoires, and consequently, has distorted realities of communicative patterns especially in Amerindian societies, where nonverbal repertoires are more common (Basso, 1970; Darnell, 1981). The Cree, for instance, place great emphasis on the use of silence as an appropriate response. A direct questioning and answering etiquette is not a common communicative pattern among the Cree. The correct etiquette for the Cree, as described by Farkas (1986), is to present deflective responses to questioning, that is, responses that are indirect so that an answer is not given in response to a question.

This deflective or indirect communication pattern reflects a desire to not expose

the self. The Cree interpret questions designed to elicit specific responses as an attempt to control another's behavior (Farkas, 1986). The fundamental cultural values are protection of personal autonomy and noninterference. "The valued interactional skills are...concentration on the essence rather than the surface appearance of both words and persons, listening, and accepting the right of others to speak because of their personal autonomy" (Darnell, 1988, p. 71).

The Cree have been described as taciturn and reserved, and there is a tendency to relate the absence of verbal expression with the absence of feeling. When I first began to work with the Cree, non-natives described them as not being at the feeling level and not experiencing the same emotions as the non-Cree. Darnell (1988) states that the major function of speech for many Native Americans is instrumental rather than expressive.

> We describe Indians as reticent, finding that they tend to understate their emotions in their manifest behavior. But if we pick up the stick of culture through Indian eyes, we will find that we mask our true feelings with a conspicuous flim-flam of overexpression; that we sometimes even confuse ourselves, as to what the real feelings are (Preston, 1976, p. 452).

In personal communication with Colin Scott (1993), a medical anthropologist who worked with the Cree, he remarked that terms relating to emotional states may be found in the Cree "dictionary," like "miyupimaatisiiu," which refers to "being alive well." There are indications regarding things that are disturbing, those that show insight, and so on. Scott noted that the Cree are limited verbally only around sensitive issues, and that the level of intuition in regards to emotional states is astonishing. According to Scott,

who spent several years living with the Cree in Northern Quebec, Euro-Canadians seem to have difficulty with the Cree's way of reading into things and situations, especially with their in-depth understanding of nature, life, and death. In terms of experience, which is different from the expressive codes that Scott explains, Phillips (1988) mentions that Euro-Canadians sometimes feel they simply do not know how the Natives they are interacting with are reacting to the experience.

Basso (1970) looks at the Western Apache culture, which is similar to the Cree, and finds that the Apache's decision to speak or be silent depends on the nature of relationships to other people. For example, when someone is sad it is courteous and considerate not to attempt to engage them in conversation.

My experience with the Cree is that they are not as taciturn as they are so often portrayed to be. I have noticed that co-presence - just being together and not necessarily talking - is what is valued. Once the non-Native accepts this style of simply being then the non-Native person is allowed "into" their culture. In other words, once I showed understanding, acceptance of and respect for their ways, then and only then was I invited to the bushcamp and their homes, to join their feasts and to eat with them. I also noted that teasing is understood in all its subtlety when there's a high degree of intimacy (Preston, 1976).

Preston (1976) defines Cree reticence as an area of self-control that directly affects personal exposure or self-expression. In the Cree cultural milieu, reticence has a positive facilitating function and meaning; it is not necessarily a defense mechanism. This form of control over self-expression focuses perceptions on a limited yet direct

expression of the personality, which fosters sensitivity and in depth understanding of interpersonal relationships (Preston, 1976).

Prince's (1993) personal experience with the Cree offers a different light on this issue of taciturnity and reticence. He stresses that the lack of verbalization is a function of context rather than a specific Cree character trait. "Indeed after working with Crees for several years, I found they could talk as much as Europeans, even about their feelings, free-associations and dreams" (Prince, 1993, p. 18).

One of the in depth and eloquent explanations of Cree communication is directly from a Cree elder, cited by Darnell (1981):

> Perhaps the most common Cree metaphor for depicting relationships is that of a tree and its branches. When applied to social interaction, the strong roots are provided by the cultural tradition and the branches represent categories of social persons who are bound by their relationships, not by their talk (p.57).

Cree narratives

The Cree prefer to converse about events in a narrative form rather than conveying explanation in the form of simple facts. In the Cree context, narration serves to demonstrate how events have particular meanings. Preston (1975) claims that Cree narration is interpreted as a vehicle for socialization, news, entertainment and a channel for aesthetic expression. Narration expresses patterned world of meanings and it "functions to convey to the hearer a whole and precise perception sometimes almost a visual image, within the appropriate, inherent context" (Preston, 1975, p.10, emphasis

in original).

Cree narration may be viewed as an expressive art form as aesthetic style is found in the narrator's expressive skill and in the language used. Sapir (1921, p. 228) once noted, "single Algonkian words are like tiny imagist poems" - which also applies to Cree narratives, although narratives are not short poems. Events reported in narration may sometimes be remembered more as visual images than as words (Preston, 1975).

The narrative form of Cree conversation is valuable in understanding concepts of psychological mindedness and alexithymia within the Cree cultural milieu. For instance, Preston (1975) stresses that the Cree do not underestimate the importance of thought and emotion, yet great emphasis and reliance is placed on action. In addition, ambiguity and unpredictability are inherent in the personal meanings that are represented in the narratives. Preston (1975) goes on to explain that "ambiguity and unpredictability [in Cree narration] are more a part of the phenomenal world, and man seeks to reduce this ambiguity through a precise and sensitive understanding of the whole context" (p.21).

With the Cree, personal symbolisms are expressions of emotion manifested in the form of song and stories, which may be instrumental in the success of hunting and fishing ventures (Preston, 1975; Speck, 1977). In a spiritual way, the animals are influenced by these art forms, and this also is a manifestation of the powerful relationship between man and animals in Cree culture.

Imagery and dreams among the Cree

Amerindians have long been preoccupied with pursuing inner vision in order to

enhance one's existence, including the physical, mental and spiritual aspects. They have often sought shamans to promote healing to guide people to take healthier paths in their life journeys, and this tradition continues today (Hultkrantz, 1992). The shaman or healer plays a powerful role, which is "essential to the biological, spiritual, and cultural survival of his community" (Noll, 1985, p.445). Young, Ingram and Swartz (1989) present an ethnographic account of the inner vision and reality of a Woods Cree medicine man, or shaman. In this Cree shaman's cosmology of the spiritual world, dreaming, good and bad spirits, and animal spirits are considered important and they may be called upon for various reasons in healing ceremonies.

The fact that the Cree, like many other Amerindian tribes, consider mental imagery and inner vision as part of a private domain, clearly has implications for the assessment of alexithymia or any other psychological-mindedness construct within this cultural context. The expression of one's inner thoughts and feelings are viewed as so sacred to healing ceremonies and special, private encounters that it is totally inappropriate for a Cree person to share his/her feelings with a stranger within a strange environment, such as a clinical milieu. However, if the Cree person has established a sense of comfort in the clinical milieu and if the clinician is considered as a healer, then emotional expression is made with less apprehension. Young et al. (1989) accentuate the importance of not taking a belief system of an individual from a different culture out of context. These authors set forth that the whole system of native religion should be viewed as "remarkably successful in providing people with a way to get in touch with their natural origins" (p.39).

Dreams also play a significant role in Cree culture, as in many other Amerindian groups like the Ojibway (Hallowell, 1966). Among the Ojibway, dream experience is interpreted as actual experiences of the self and functioned as a positive factor in the operation of their sociocultural system (Hallowell, 1966). As Hallowell explains, the interpretation of dreams was seen as a necessary factor in the maintenance of their culture and community, which gives meaning to their lives. Speck (1977), in describing the Naskapi, says that dreaming is considered as a sacred event. Dream cultivation and submission to dream control becomes a dominant part of one's personal growth process and inner life.

Dreaming can cultivate deeper communication with one's inner self, or what the Naskapi refer to as "the Great Man." Once in contact with the Great Man through dreams, "the next obligation is for the individual to follow instructions given to him in the dreams, and to memorialize them in representations of art" (Speck, 1977, p. 35). Although this is a traditional ritual among both the Cree and Naskapi, it continues to be practiced specifically among the people who live within the bushcamp (Young et al., 1989). For example, when a Cree person experiences a significant dream, he or she will later create something to symbolize it, like carving in birchbark, or in a canoe or making a craft, with the symbol of the dream depicted. The point here is to illustrate that although the Cree are verbally reticent, they have dream activity, fantasy and symbolic life that is usually enacted rather than verbally symbolized.

In contrast to Speck, Tanner (1979) argues that dreams are not solely private experiences, but they are also shared with others. Dreams may refer to the future of the

family or the hunting group, and dreaming is the most common way for hunters to learn about their hunting success in advance (Tanner, 1979). Both Speck (1977) and Tanner (1979) agree that people who live in a bushcamp are taught to pay attention to and remember their dreams.

Cree and art

Interestingly, there are no words for "art' or "artist" among the Woodlands' people, as well as no rules of art. Art-making among the Cree was not viewed as specialized work by artisans and it was not a separate activity from ritual events (Phillips, 1987). The traditional religion of the Cree of Northern Quebec is a natural philosophy that addresses the realities of their life, both in the bush and in the village. However, as Tanner (1979) claims, "it is not primarily a system of elaborate and explicit verbal explanations and exegesis. At the centre it is a system of symbolic action available for the individual to use or to ignore as he wishes" (p.213). Witherspoon (1993) notes that among all Native Americans religion is not an intellectual exercise of belief but a performance involving song, dance, painting and storytelling.

With both the Cree and the Naskapi, the religious function of art is through the contemplation of the inner self, or the "Great Man," which leads to art designs in beadwork, embroidery or other processes of decoration. Through the Cree's art, from past to present, what is of significant note is the relationship between man and nature.

The Woodland Indians, which include the Cree, Ojibwa, and Naskapi, as mentioned earlier have always been accustomed to using visual representation to record

their dreams, which also helped validate their dream experience. The aesthetically enhanced, visual representation made "the private, transitory experiences of dreams concrete and public" (Phillips, 1987, p.66).

Contemporary Cree artists continue to draw inspiration from traditional forms like Norval Morrisseau, who places legends in picture form and John Blueboy, a craftsman who makes goose decoys (Graburn, 1993). Painting, although seldom practiced now among the Cree, was once considered their aboriginal art. "With lines, bars, dots, rectangular crosses, they painted the inside of a slain animal's skin in propitiation of the animal's spirit" (Patterson, 1973, p. 40). Other painted surfaces included drums, bear skulls and human faces.

Although documented examples of body decoration are extremely rare, this art form was an important ritual and aesthetic expression. Body decoration afforded considerable opportunities for inventiveness and individual self-expression (Phillips, 1987).

In general, with most Amerindian tribes, art functioned as a part of religion, politics and personal adornment (Graburn, 1993). Even to the present day, Native people do not understand the white people's philosophy of art, which creates a social and cognitive distance between artists and artisans, and the market chain (Graburn, 1993). With the Cree, rules of living are embodied in symbolic systems, and works of art become a language in and of itself, through which this society conveys its conception of the universe and its cultural philosophy. As Taylor (1980) eloquently sets forth, which may be applied to Amerindians in general, "we can sense a bond of sympathy in their

art that goes well beyond a respect for craftsmanship. Exotic distance drops away under the impact of a shared human awareness" (p. 31). It is important to note that this is about Euro-Canadians' experience of looking at Cree art.

Art therapy with the Cree

As art therapy is a relatively new field, cross-cultural art therapy, specifically with Amerindians is a recent development. Researchers involved in this area include, Lofgren (1981), Dufresne (1990) and Ferrara (1991a, 1991b, 1994). A common underlying facet in these works is the significance on formulating an understanding of the cultural framework of the Native American client. Natives' positive response to the idea of using art as a form of healing is due to the symbolism in their culture being so rich and the idea of expressing themselves through art is such an inherent cultural experience.

Before beginning to work with the Cree, I was told by some non-Cree colleagues, that it would be an arduous task since the Cree children are apparently "blocks of ice" and there is a pronounced inability to describe feelings. One Cree nine-year old boy was assessed as "not being at the feeling level," in other words this child was not able to identify his feelings and emotions (Ferrara, 1991b). In terms of the concepts previously discussed, he would be considered as non-psychologically minded and unsuitable for psychotherapy. It was for the above reasons that he was considered a candidate for art therapy. On the contrary, the art therapy assessments showed that this boy was very much at the feeling level and he approached the art materials with confidence. He also expressed a need to establish a relationship with me in our first session, suggesting that

he was far from being a block of ice.

There may have been a number of reasons for this Cree boy's positive response to individual art therapy including the attraction of the art materials, and his perception of me as a member of his cultural group due to my dark complexion. This boy clearly had the ability to express his feelings, mostly through nonverbal means (i.e. art), and he needed treatment partly to help him organize his emotions and emotional life.

A relevant report with a different focus is Fulford's (1993) structural analysis of drawings of a group of Cree children. Fulford illustrates how art is used as a natural form of communication. The author claims that the children's drawings have a narrative function, in that they contain elements of a narrative and the drawings are used to communicate discursively among the Cree children. The drawings are viewed as a locus of Cree cultural knowledge and function as a bridge between inner speech and writing (Fulford, 1993). Fulford regards the children's artwork as an interesting form of speech among themselves, as it is a silent form of communication. "While the children were uninhibited about spontaneously producing drawings, they were hesitant to provide commentary and rarely responded verbally to my questions about the drawings" (Fulford, 1994, p.3).

Fulford (1993) highlights an important dimension of the Cree style of abstraction, which is relevant to this present study and in relation to alexithymia. This dimension relates to giving words to images which is problematic for the Cree because the translation from inner experience into language takes away from the meaning of the experience (Speck, 1977). With the Cree, as also witnessed in my clinical experience,

images are part of one's inner experience and giving words to images removes the special quality that is adhered to images alone. As Bruner (1979) also argues, although the possibility to translate the artistic experience into words exists, "what is lost in such translations is the very fullness of the connection produced by the experience of art itself" (p.74).

Chapter 6 - Research Study

This chapter presents a cross-cultural, correlational study of alexithymia.

Methods

Sample

The subjects were convenience samples of 36 Cree and 36 Euro-Canadians matched for age, sex and educational level. Subjects were located through community centres and health facilities in both Montreal and Chisasibi in Northern Quebec. Self-reported language skill in speaking, reading and writing Cree and English was recorded. Each subject's occupation was coded by the Blishen Occupation Codes Index (Blishen, Jones, Naegele, & Porter, 1973).

Measures

Verbal Measure of Alexithymia

Alexithymia was measured with the Toronto Alexithymia Scale (TAS-20) (Bagby, Parker & Taylor, 1994). The revised version of the TAS is a 20-item a self-report questionnaire measure (see Appendix A). Items are rated on a 5-point scale from strongly disagree (1), to strongly agree (5). An example of one of the items on the scale is: "It is difficult for me to find the right words for my feelings."

The original 26-item TAS was developed to measure the following five selected content areas related to alexithymia: a) difficulty in describing feelings, b) difficulty in

distinguishing between feelings and bodily sensations, c) lack of introspection, d) social conformity, e) impoverished fantasy life and poor dream recall (Taylor, Bagby, Ryan, and Parker, 1990). The revised TAS-20 does not include questions on daydreaming due to the findings of low corrected item-total correlations among the items directly assessing daydreaming on the TAS-26 (Bagby, et al., 1994). Factor analysis of the TAS-20 yields a three-factor structure that covers the theoretically posited dimensions of alexithymia, including difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking.

The TAS-20 has demonstrated good internal consistency (Cronbach's $\alpha = 0.81$), test-retest reliability and factorial validity, as well as convergent and concurrent validity (Bagby, et al., 1994).

Pictorial Measure of Alexithymia

The nonverbal measure of alexithymia used was the Scoring System for the AT9 test, SAT9 (see Appendix B). The AT9 Test, developed by Durand (1967), presents the subject with nine symbols or symbolic stimuli (a character, an animal, a refuge, water, a fall, fire, a devouring monster, a sword, something cyclical), which must be integrated into a drawing and an accompanying explanation. This in turn, creates a mythical micro-universe (Demers-Desrosiers, 1982). These symbols were selected to provoke anxiety (fall and devouring monster), to suggest tools to resolve it (sword, refuge and something cyclical), and a resolving agent (character) with accessory items (water, animal, fire). An inhibited symbolic function is manifested in subject's inability to create a myth through drawing and narration. "If imagination is deficient, the subject will be unable to

defend against anxiety and unable to integrate the meaning (story) and image (drawing) of the symbols" (Cohen, Auld, Demers, & Cathchlove, 1985).

The AT9 Test was introduced into the alexithymia literature by Demers-Desrosiers (1982). The SAT9 test is a more objective and quantifiable scoring system than the original AT9 test, which traces symbolic function, a facet central to the alexithymia construct (Cohen, Demers-Desrosiers, & Catchlove, 1983). The SAT9 is a highly internally consistent instrument (Cronbach's $\alpha = 0.91$) and it is positively related to age ($r = -0.37$), inversely related to occupational level ($r = 0.46$) (Cohen et al., 1985).

In the present study, the SAT9 was scored differently from previous studies (Cohen, 1984), where a discriminant function was developed. Cohen (1984) developed a cluster analysis of all the symbol interactions in the drawing, explanation and resolution (1 or 0), and seven clusters were selected. The items in each cluster were then added together to form a cluster score and the seven cluster scores were entered into an equation or discriminant function. This discriminant function was not considered as a statistically reliable tool as it was not validated in a sample separate from the one from which the discriminant function was derived. As well, the discriminant function lacks face validity or easy interpretability. We attempted to develop a simpler method of scoring that had face validity in terms of the alexithymia construct and that would, therefore, be more easily interpreted.

In the present study, the number of elements within each cluster in the drawing section of the scoring sheet was totalled to create a score of the level of drawing detail (SAT9D); similarly, the number of elements in the written explanation was separately

totalled to create a measure of the level of explanation detail (SAT9E). Clearly, more details in the drawing may stimulate more written explanation. To correct for this bias, a ratio was formed of elements in the explanation divided by elements in the drawing {SAT9E/(SAT9D + 1)}.

The "resolution category" of the SAT9 was dropped in the present study because the relevance of this category and the method of scoring were not made clear in the literature on SAT9 (Cohen, 1984; Cohen, et al., 1985).

Symptomatology Measures

Depressive symptomatology was measured by the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977). The CES-D consists of 20 items characteristic of clinical depression and has been shown to be a sensitive screening instrument for depression, as well as a sensitive indicator of nonspecific psychiatric distress (Roberts & Vernon, 1983). The CES-D questionnaire has demonstrated established reliability and validity (Radloff, 1977).

Somatic symptomatology was measured by a modified version of the somatization subscale of the revised version of the Symptom Check List-90 (SCL-90-R) (Derogatis, Rickels, & Rock, 1976). The SCL-90-R somatization scale consists of 12 items pertaining to common somatic symptoms, such as headaches, pains in the heart or chest, sore muscles, hot/cold spells and numbness. The scale was modified to a response format consistent with that of the CES-D. The CES-D and SCL-90R were combined to form one self-report checklist (see Appendix C). In this version, each score represents the sum of the number of somatic symptoms experienced during the preceding week weighted by the

frequency of each symptom (Kirmayer & Robbins, 1993). Previous studies have shown the reliability of this scale (α=0.80) and it is a valid indicator of somatic distress (Robbins & Kirmayer, 1986; Kirmayer & Robbins, 1993).

Emotion Suppression

The Emotion Suppression Scale, used to measure the tendency to suppress or inhibit emotional expression, is an eight-item scale based in part on the Affective Inhibition scale of the Illness Behavior Questionnaire (IBQ) (Pilowsky & Spence, 1983). Kirmayer and Robbins (1993) added four items to the IBQ scale to create the Emotion Suppression Scale (see Appendix D). This scale has shown a moderate internal reliability (α=0.73) (Kirmayer & Robbins, 1993).

Art Therapy Measure

An art therapy measure, the Ulman Personality Assessment Procedure (UPAP), was given to a total of 12 subjects, 6 Cree and 6 nonCree. The UPAP is a series of four pictures drawn by the subject with the use of a standard set of materials. The visual elements are rated using a structured checklist (see Appendix E). The first drawing is an open-ended, free drawing. The second is a kinesthetic picture where the subject is first asked to follow the tester in arm movements (vertical, horizontal, and circular) in the air, and then record these movements on paper as done in the air. In the third drawing, the subject is asked to close his/her eyes and scribble on the paper, and then look for an image in the scribble and develop it. The scribble tends to tap into the unconscious more so than a free drawing. In the fourth picture, the subject has the choice to either create a free drawing or another scribble.

The UPAP drawing series was originally developed for diagnostic purposes (Ulman, 1975). No norms exist for this evaluation at present. However, it is a standard technique used in art therapy in exploratory clinical work. The creation of a UPAP manual is currently in progress (Agell, Howie, Kramer, Williams, & Wilson, 1993). In order to promote inter-rater reliability, the 12 UPAPs in this study were also blindly rated by another art therapist familiar with the procedure. There was little disagreement between the two raters in relation to the visual elements of the artwork rated using the UPAP checklist. The items that were disagreed upon included color, use of space and the meanings behind some personal symbols, and these were resolved by discussion to reach consensus.

Ethical Considerations

The research was conducted with full attention to the guidelines of the Association of Canadian Universities for Northern Studies (1990). The Band Council of the Cree community in Northern Quebec and the Native Friendship Centre in Montreal were approached for permission to complete this study. Some Cree individuals were involved in offering their input on the research questions. The Cree translators also suggested some changes to the consent form, during the process of translation.

The Cree community was also informed that the final results of the present study will be made available to those interested. A copy of the whole thesis will be given to the Cree Band Council.

Procedures

Although the initial intention in this study was to translate all the measures into

Cree and check for semantic equivalence by back-translation, due to limited time, only the consent form was translated in Cree (see Appendix F). All subjects were given a consent form and the four sets of self-report questionnaires and a pictorial measure. The first 6 Cree and 6 Euro-Canadian subjects were chosen to complete an additional measure, the UPAP, which involved the making of four drawings.

Thirty out of the thirty-six Cree subjects were interviewed in Chisasibi, while the rest were interviewed in Montreal. The Cree subjects in Chisasibi were recruited with the help of a community worker and a Band Council member. I was introduced to people in the community commercial center (including sales people, radio personnel, and unemployed people) the Cree Board of Health and the Band Council offices. In Montreal, they were recruited by workers at the Native Friendship Center.

A list of all the Cree subjects was constructed, which included the age, gender and level of education of each subject. The subjects in the Euro-Canadian sample were then selected to match each Cree subject for gender and within a two-year range for age and education. The Euro-Canadian subjects were approached in community centres in the Montreal and West Island area, in various office buildings in the Montreal area, where a description of the study was placed on a bulletin board and those interested were asked to contact me.

The questionnaires were explained to each subject and then, the consent form was given to them. All subjects were asked to read through the consent form carefully and ask questions if necessary. The interviews took place in an office provided to me in both Chisasibi and Montreal. The interviews, which were on a one-to-one basis, took

approximately 40 to 60 minutes, depending on whether the subject was asked to complete the extra four drawings, which took approximately, an additional 30 minutes.

The measures given to each subject were administered in the following order: (1) the symptomatology measures, (2) emotion suppression, (3) TAS, and (4) the SAT9. The 12 subjects who completed the four drawings (UPAP) did so after the SAT9.

All the data received was entered in the computer using the SPSS program. The questionnaires were scored according to the instructions given for each. As previously mentioned, the SAT9 was scored by totalling the number of elements in the drawing for each cluster, as well as counting the elements or symbol interactions found in the written explanation for each cluster. The visual elements in the four drawings of the UPAP were scored using the UPAP checklist.

Data Analysis

Reliability analysis was computed for all the scales used in the present study. A correlational analysis was also computed among the measures of psychological mindedness, for the whole sample and for the two groups separately. Cree and nonCree groups were compared with t-tests for ordinal variables and chi squares for categorical variables. For the significance tests, both equal and unequal variance of the t-test according to the Levene test was used. Due to a small N (72) in this study, an analysis to check for outliers was completed.

Separate multiple regression models were computed for the TAS and each of the three factors of the TAS, as well as for the Emotion Suppression Scale (EMOSUP), the

SCLSOM-R, the SAT9D, SAT9E, and SAT9RATIO, with independent variables of sociodemographics, ethnicity and symptomatology.

Results

As seen in Table 1, there were no significant differences between Cree and nonCree groups on age, occupation, gender, proportion studying full-time or part-time, and work. The results shown in Table 1 indicate that the matching procedure was successful except for education. The age range was between 21 and 50 in both the Cree and the nonCree. The minimum years of education was 6 years and the maximum was 17. For the Cree subgroup, the average level of education was 11.5 (2.0) compared to 12.6 for the nonCree group. On average then, the Cree had about one year less in education, which may account for the subsequent differences found. With regard to the location of the interviews, 59.7% were completed in Montreal and 40.3% in Chisasibi.

Table 2 shows that the scales had moderate to excellent internal consistency in both the Cree and nonCree populations, except for Factor 3 of the TAS. The verbal alexithymia measures were actually more internally consistent among the Cree, while the pictorial alexithymia measure was somewhat less internally consistent. In comparison with the mean TAS scores found in student populations by Bagby, et al. (1994), the Cree group was around the same range of 50.1, with the Cree having a mean of 49.2, while the nonCree group had a lower mean of 45.4.

Both TAS and the Emotion Suppression Scale were the most internally consistent. The Emotion Suppression Scale exhibited high internal reliability in the Cree subgroup.

The internal reliability found for the CES-D symptomatology measure was high for the Cree and higher for the nonCree. The differences found for both symptomatology measures were nonsignificant. Among the Cree, internal reliability was higher in the drawing part of the SAT9 than the explanation part.

In Table 3, Cree and nonCree were compared on measures of alexithymia and emotion suppression. Although there was no overall difference, a significant difference was found with TAS Factor 1 ($p < 0.05$). Cree subjects reported more difficulty identifying feelings and bodily sensations, and this was due to multiple items on the scale.

A correlational analysis was conducted among the measures of psychological mindedness, sociodemographics, cultural group and symptomatology (Table 4), showing how education, depression and somatization were significantly related to alexithymia and emotion suppression. TAS was significantly related to education and symptomatology. TAS Factor 1 was significantly related to education, membership in the Cree group and symptomatology. TAS Factor 2 was related to education and depression, and TAS Factor 3 was related to depression. Of significant note, although not reported in a table, the correlations among the measures and sociodemographics for the Cree group showed that the TAS and TAS factor 1 were negatively related to education (TAS, $r=-0.43$, $p < 0.01$; TAS Factor 1, $r=-0.33$, $p < 0.05$).

Inter-correlations of these measures for the whole sample (Table 5) show that while the number of pictorial details in the SAT9 was negatively related to alexithymia, the ratio of explanations to details on the SAT9 was weakly - though significantly -

related to alexithymia in the whole sample. The number of details was negatively related to TAS Factor 3, which relates to externally oriented thinking. The ratio of explanations to details was most strongly related to the TAS Factor 1.

Emotion suppression was significantly related to all three factors of the TAS but not to the SAT9. However, these relationships were different between the groups. Table 7 (Cree sample) as compared to Table 6 (nonCree sample) shows that emotion suppression was more strongly related to the TAS among the Cree ($p < 0.001$) and negatively related to the number of pictorial details. This correlation was not as strong for the nonCree subgroup ($p < 0.05$). The SAT9RATIO was not significantly related to alexithymia among the Cree.

Multiple Regression Analyses of TAS

Multiple regression analyses were used to assess how much variation in alexithymia was explained by social variables. First, the effect of sociodemographics and ethnicity (Table 8) on alexithymia was assessed. In Model I (Table 8), education accounts for a significant amount of the variance, indicating that lower levels of education are associated with higher scores on the TAS, when age, gender, and cultural group are statistically controlled. Also, cultural group had no effect when other variables were controlled. When depression is added to the equation in model II, the effect of depression is much stronger than education (Table 9), showing that alexithymia is strongly related to depressive symptomatology. Also, in this model, the effect of education becomes insignificant while an effect of gender is uncovered; i.e., men are more alexithymic than women when the level of depressive symptomatology is controlled.

Cree subjects had higher scores on TAS Factor 1, which deals with difficulty identifying feelings and bodily sensations. To explain this difference, a multiple regression model was developed to assess the effect of sociodemographics and ethnicity on TAS Factor 1 (Table 10). All these factors explained 11% of the variance. The increased level on Factor 1 found for the Cree was largely mediated by their lower level of education. When depression was added to the equation (Table 11), the level of depressive symptomatology became the strongest determinant of difficulty in identifying feelings and bodily sensations. All these factors explained 40% of the variance. Moreover, the effect of education found in the previous model was eliminated, indicating that the lower levels of education may simply be a contributor to increased risk for depression, which in turn, leads to greater difficulty identifying feelings and bodily sensations.

Depressive symptoms were the only significant contributor to TAS Factor 2 (Table 12), whereas the bivariate difference in depression disappeared at the multivariate level for the TAS Factor 3 (Table 13). Again, in the model in Table 12, the effect of education was eliminated by depressive symptoms.

Multiple Regression Analyses of Emotion Suppression

For the Emotion Suppression Scale, there was an effect of education at the multivariate level (Table 14), where the lower level of education was the only significant determinant of emotion suppression. In Model II (Table 15), the effect of depression contributed to emotion suppression and reduced the partial correlation with education to insignificance. This suggests that the tendency to try to suppress one's emotions increases

when one is more depressed.

Multiple Regression Analyses of SAT9

For the drawing task of the SAT9, the first model showed that the effect of education is the strongest predictor of including more in the drawing, when all other sociodemographic and ethnicity variables are controlled. Even when depression was added to the equation, education remained the strongest predictor. No significant predictors were found for the explanation task of the SAT9. (The SAT9D and SAT9E regressions were not significant and so they were not reported in tables).

For some multiple regression models, a few outliers were found. When these outliers were removed, similar results were obtained, except for the SAT9RATIO model. For the SAT9RATIO multiple regression model (Table 16), when the analysis was redone without one outlier, both the gender and depression effect at the bivariate level disappeared at the multivariate level.

Multiple Regression Analyses of Alexithymia & Somatization

Further multiple regression analysis was done with the whole sample to address the question of whether alexithymia influences levels of somatic distress as measured by a modified version of the SCL-90 somatization scale. In this analysis, a dummy variable for ethnicity was used. The TAS, TAS Factor 1, and EMOSUP variables were not placed in the same equation because of the issue of multicollinearity. In Model I (Table 17), the emotion suppression effect and gender effect are the strongest predictors of somatic symptoms, explaining 18% of the variance. Women are more likely than men to report somatic symptoms and the tendency to suppress emotions also increases the tendency

reporting somatic symptoms.

In Model II (Table 18), the tendency for nonCree to report more somatic symptoms was no longer significant when the sociodemographics and emotion suppression variables were controlled. Ethnicity and TAS were significant predictors of somatic symptoms, yet the gender effect was the strongest; 18% is the variance that all variables together account for. Alexithymia is thus related to somatization and the Cree are less likely than the nonCree to report somatic symptoms and women are more likely to somatize than men. In Model III (Table 19), when SAT9RATIO is added there is no additional effect above and beyond variables already in the model. Of note, the SAT9RATIO does not reduce the relationship of the TAS to somatic symptoms giving further evidence that the measures are unrelated.

Model IV (Table 20) shows that the addition of depression to the model washed out all the other effects, including gender, ethnicity and alexithymia. Tables 21-23 repeat these analyses for TAS Factor 1. Model V (Table 21) includes the effect of TAS Factor 1 as well as sociodemographics and ethnicity. The TAS Factor 1 and gender effects remain significant at the multivariate level, as well as the group difference, explaining 24% of the variance. These effects remain the same even when SAT9RATIO in Model VI is added to the equation (Table 22).

When depression is added to the model (Table 23), accounting for 33% of the variance, the gender and TAS Factor 1 effects disappear, yet the group effect remains significant and depression is the strongest predictor. Therefore, depression is related to somatization, and women and nonCree are more likely to report somatic symptoms. For

comparable levels of depressive symptomatology, the Cree report fewer somatic symptoms.

Multiple Regression Analyses of Effects of Culture on Somatic Symptoms

In order to explore what the cultural difference in somatic symptoms levels found was due to, cumulative, sequential models of multiple regression were completed (Table 24). Significant positive correlations were found between the somatization scale and the emotion suppression scale, TAS Factor 1, and CES-D. The somatization scale was negatively related to ethnicity, age, gender and education. Therefore, the bivariate correlations showed that higher levels of somatic symptom reporting were related to being non-Cree, female, greater emotion suppression, higher levels of depressive symptomatology, and TAS Factor 1.

When age, gender and education were controlled, the relationship to Cree ethnicity was reduced to insignificance, but the female gender relationship remained strong. When emotion suppression was added to the model, it was significant and female gender remained a significant independent contributor. Depressive symptomatology became a significant predictor when added to the model and neither gender nor emotion suppression remained significant. Ethnicity, gender and the TAS Factor 1, were predictors when entered with other sociodemographic variables. Female gender remained an independent contributor and ethnicity (non-Cree) became significant. When the CES-D and TAS Factor 1 were added together in the model, depressive symptomatology was highly significant, and ethnicity remained significant but gender was no longer a predictor. This last model explained 33% of the variance. Comparison of these models

reveals that sociodemographic factors explained 13% of the variance in somatic symptoms, depressive symptomatology explained an additional 19%, while alexithymia, Factor 1 added only 1% to the total explained variance.

Analysis of Qualitative Data

This section presents the qualitative analysis of the styles of pictorial representations among the Cree and Euro-Canadians that were completed by the subjects in this study.

The Cree subjects did not question the purpose of the UPAP or comment on the cultural irrelevancy of the task, as they did with the SAT9, perhaps because the UPAP is a more open-ended task than the structured SAT9 pictorial measure. All Cree subjects applied themselves immediately to completing the drawings whereas among the nonCree sample, many subjects made comments like, "I can't draw," and "Do I really have to do this part (of the interview)?".

In most of the UPAP drawings created by the Cree subjects a common element of symmetry was found (Figure 1). This was not a common element found in the drawings created by the Euro-Canadian subjects.

In addition, 5 out of 6 Cree subjects, as compared to 2 out 6 nonCree subjects, responded to the second drawing of the UPAP, the kinesthetic drawing, by drawing the body doing the movements instead of recording the movements alone (i.e. the circular, vertical and horizontal lines).

With the UPAP the Cree subjects had more difficulty than the Euro-Canadian

subjects with the scribble. They appeared hesitant and responded by drawing preconceived images while scribbling with their eyes closed.

When given the choice to create a free drawing or a scribble, all six Cree subjects, as compared to three of the nonCree subjects, selected the free drawing over the scribble.

Chapter 7 - Discussion

The literature review in this study identified cultural variations in styles of verbal expression and pictorial representation related to psychological mindedness. This section will outline the results of both the quantitative and qualitative research and present possible alternative explanations.

Quantitative Data

The findings on the verbal measurement of alexithymia show that the TAS and the first two of its factors were internally consistent in both Cree and nonCree groups. The third factor had only poor internal reliability but, again, results were similar for Cree and nonCree groups. The mean, range and standard deviation of the TAS and its factor scales were similar between Cree and nonCree groups as well, except for TAS Factor 1 (difficulty identifying bodily sensations and feelings) on which the Cree scored significantly higher (i.e. more difficulty) than the nonCree. This suggests that the TAS was understood and responded to similarly in the two groups and so is a potentially reliable measure. Further, there was some indication of a cultural difference on TAS Factor 1, with the Cree reporting more difficulty in identifying feelings and bodily sensations, a major component of alexithymia.

The significant difference found between Cree and nonCree on TAS Factor 1 suggests that when it comes time to identify feelings and bodily sensations, the Cree may have difficulty. This may be because of an emotional and somatic stoicism; perhaps the

Cree are not supposed to express physical symptoms or distress. As a result, the Cree may bear depression more stoically. They may, therefore, not attend closely to bodily sensations or be reluctant to identify or label them.

The emotion suppression scale had higher internal reliability among the Cree than the nonCree suggesting the items tapped a culturally salient construct. Further, emotion suppression was more strongly related to the TAS and its first two factors among the Cree than among the nonCree. This may reflect the higher internal consistency of the emotion suppression scale among the Cree or indicate that alexithymia itself, at least as measured by the TAS, is more closely related to conscious emotion suppression among the Cree than among the nonCree or Euro-Canadians. Of note, some items on the emotion suppression scale are reversed scored. The idea of reversed scoring is to prevent acquiescence bias. The range of scores was broad indicating that the high internal consistency was not simply the result of an acquiescence bias.

Within the Cree cultural experience, suppressing one's emotions is not necessarily considered as "unhealthy," but rather as a coping skill. Children are socialized to suppress their emotions, to be reticent and not verbally expressive of their feelings (Preston, 1976). As Berry and Bennett (1992) outlined in their study on Cree conceptions of cognitive competence, as children mature both their verbal and emotional expression becomes muted. Cree children are encouraged to channel their feelings through other forms, such as hunting, dreams, and arts and crafts (Speck, 1977). Thus, it is not that emotions are lacking or nonexistent but that they are expressed through various culturally appropriate channels that are not essentially verbal.

The SAT9, developed as a pictorial measure of alexithymia, showed moderate internal consistency in both Cree and nonCree groups, although the measure of elements in the verbal explanation was less internally consistent among the Cree. There were no significant differences between Cree and nonCree in either the pictorial elements, explanation elements or the ratio of explanation elements to drawing elements.

The result that the written task of the SAT9 made more sense to the nonCree than to the Cree may be related to the fact that the nine "archetypes" of the SAT9 (water, fire, fall, something cyclical, sword, character, refuge, animal and a monster), stem from Western mythology, being reminiscent of medieval tales. The symbols originate from imaginary structures (Demers-Desrosiers, 1982), corresponding to images of life. These images include the heroic orientation (character, sword), the mystical (refuge) and the synthetic structure (something cyclical).

The discrepancy found in the explanation task of the SAT9 may be due to the fact that all the elements of the SAT9 scale are drawn from a common paradigm from the Western society and not the Cree. These internal relations are being played out for the nonCree. For the Cree on the other hand, the symbols are not seen as part of the template instead they are perceived individually. One Cree subject created the monster as the European culture when it invaded Amerindian land, and the decimation of Native culture began, which was seen as something cyclical or progressive (Figure 2).

In addition, the measure of explanatory detail of the SAT9 was unrelated to the TAS while the measure of pictorial details was negatively correlated. These results would seem to contradict the notion of alexithymia as a global deficit in symbolic expression.

These results also indicate either invalidity of the SAT9 or a dissociation of verbal and pictorial alexithymia. The invalidity issue could be tested by comparing the SAT9 to other measures of psychological mindedness. What is required is further development of the SAT9 in terms of the development of normative data and the relationship between symbolic functioning measured by the SAT9 and other characteristics of alexithymia.

Nonetheless, at some level of abstraction, these structures or symbols in the SAT9 may be considered as universal. In Cree mythology, the synthetic structure symbolized by something cyclical is a common element. Many of the Cree subjects interpreted this archetype as best represented by the medicine wheel. The archetype of something cyclical is strongly related to the Cree way of perceiving life and the four seasons. In addition, water, fire and animal are important symbols in Cree bushlife (Tanner, 1979). However, a heroic orientation towards the domination of monsters or animals through swords is not a mythic theme in Cree life. In the Cree culture, it is extremely important to establish a good relationship with animals. Animal life is highly respected and valued in the Cree culture (Tanner, 1979).

Multiple Regression Analyses

In the multiple regression analysis of the TAS, the results indicated that lower levels of education are associated with higher scores on the TAS, when age, gender, and cultural group were controlled. The effect of education was eliminated by depressive symptomatology, while an effect of gender was uncovered. This probably means that at any given level of dysphoric affect, men experience more confusion about what they are feeling than women. However, since women experience more depressive symptoms, this

relationship remains hidden unless depressive symptoms are controlled.

The Cree had higher scores than the nonCree on TAS Factor 1. In the multiple regression analysis of the TAS Factor 1, control for age, gender and education eliminated the effect of ethnocultural group. Thus, this group difference between the Cree and nonCree could be accounted for by education. Another finding from the multiple regression analysis was that higher levels of somatic symptom reporting were related to being nonCree, female, greater emotion suppression, higher levels of depressive symptomatology and to the TAS and the TAS Factor 1. A possible interpretation of these results is that depression is positively associated with somatic symptom reporting, emotion suppression, alexithymia and the female gender.

The TAS Factor 1 was associated with higher levels of somatic symptom reporting even when gender was controlled. The association between female gender and higher levels of somatic symptom reporting was not entirely due to differences in TAS Factor 1. Once TAS Factor 1 is controlled, ethnicity became a significant determinant of somatic symptom level; that is, for comparable levels of TAS Factor 1 and depression within genders, the Cree reported less somatic symptomatology. Thus, the Cree may, in fact, be less likely to somatize depression.

Emotion suppression was associated with higher levels of somatic symptom reporting, even when gender was controlled. The effects of emotion suppression and gender on higher levels of somatic symptom reporting may be due to higher levels of depressive symptomatology. In other words, when one gets more depressed, he/she reports more somatic symptoms and more emotion suppression, and women are more

likely to be depressed.

Qualitative Data

The qualitative part of this present study identified cultural variations in styles of pictorial representation. For instance, a common element of symmetry emerged in most of the drawings made by the Cree subjects, whereas in the nonCree sample, there were not any specific common visual elements. Symmetry is often seen in traditional Cree art forms. It appears to be important imagistically in Cree artwork both formally in traditional art forms and informally, in personal art expressions. In the traditional art of the Eastern Cree, symmetrical-geometric painting, for example, was quite popular (Patterson, 1973).

The Cree's use of a literal translation of body movement in the second drawing of the UPAP (Figure 3), as compared to what is expected in this task (Figure 4), may be explained by the fact that the Cree's depiction of oneself stresses external contextual factors more than internal mental processes. The body is viewed by the Cree as a framework affected by external factors. In this situation, the external factors would be related to how the arm movements in the air are affecting the body as a whole.

In relation to the Cree's perceptual process, Berry's (1976) work on cognitive style among the Cree and other aboriginal groups is quite relevant. Drawing from the work of Witkin and Goodenough (1981) and others, Berry describes the "field-dependent, field-independent cognitive styles" as related to the notion of self-nonself segregation. The field-dependent style "includes limited analytic and structuring skills in perception

and cognition, a with-people orientation and a sensitivity to social situations" (p.31). The field-independent style involves analytical thinking, social distancing and limited social sensitivity. The Cree, as also suggested in this present study, appear to manifest a field-dependent style, demonstrating social sensitivity and limited analytical and structural skills. The symmetry used in some of the UPAP drawings, as previously mentioned may be considered as a structural skill. The drawings of the Cree illustrate their field-dependent cognitive style through images of people and their environment, and how they are affected by their surroundings. For example, one Cree subject drew about how the life of the people in his community is being affected by the current hydro-electric projects.

In addition to the perceptual process, cultural concepts of the body, health and illness may influence pictorial representations. There is a highly developed sense of the body and how it is affected by the external environment, such as the social and political realities (Adelson, 1992). This was seen symbolically in the Cree UPAP drawings of people and their surroundings. Also, the Cree subjects tended to draw the human figure in an elaborately detailed fashion compared to the nonCree, who more often than the Cree expressed difficulty in drawing people.

Interestingly, in the figure drawings, the representation of the face was not as developed as the body. Preston (1976) notes in his ethnographic work on the Eastern Cree that pictorial representation of faces is not often seen, as in the form of masks for example, which is commonly found with the Iroquois and Northwest Coast Indians.

In contrast with the nonCree subjects, the Cree subjects appeared to have

difficulty with the scribbling part of the UPAP. Even in the fourth and last UPAP picture, all six Cree subjects chose to create a free drawing over another scribble. The Cree subjects approached the scribble by drawing preconceived ideas, instead of scribbling on the paper and later looking for images within the scribbles. Figure 5 shows a scribble created by a 39 year-old male, who approached the scribble with a preconceived image of an Amerindian dancer. In this drawing, there are none of the undefined lines that are usually found in scribble drawings.

The act of scribbling, of closing one's eyes and creating lines on paper, and then looking for images within the scribbled lines involves an abstract form of thought. In a sense, the subject is required to treat the scribble as a stimulus, similar to projective tests, like an inkblot. The scribble drawing also taps into the subject's unconscious more so than a free drawing due to the fact that the subject closes his/her eyes while scribbling. Scribbling on paper with one's eyes closed may be closely linked to connecting with one's inner world, which plays a significant role in the Cree traditional ritual of dreamwork. This ritual involves the role of imagery in that the visions in the dreams are re-created through images, which become sacred (Phillips, 1987; Speck, 1977; Young et al., 1989). As Cree elders have also shared with me, recreating the images in one's dream remains a current ritual within the Cree bush experience. The scribble may have been threatening to the Cree subjects and given the situation, it may not have been a culturally inappropriate task because of its links dreaming, which is such a sacred experience.

The process of abstraction that is involved in the scribble task, that is, of looking

for images within scribbled lines, may not be as easily accessible to the Cree as it is with Euro-Canadians, only because the "gradual development of higher order levels of abstraction is something much valued in their (Cree) culture" (Berry & Bennett, 1992, p.87), and thus, not something to be taken for granted or used as freely as Euro-Canadians may feel comfortable in doing. Abstract thinking may be domain-specific for the Cree and the domain is sacred. Culturally for the Cree, abstraction may be considered as being part of something sacred like dreaming and perhaps not as commonly used in non-sacred domains as with Euro-Canadians. Euro-Canadians have more time deciphering these kinds of things than the Cree, simply because the Cree may not practice it.

In relation to this concept of abstraction, when assessing alexithymia with the Cree, especially if using the SAT9, which is a pictorial measure involving a drawing and written explanation, it is important to take their cultural experiences of art and imagery into consideration. Euro-Canadians were more inclusive of details in their explanations perhaps because the images or symbols in the SAT9 made more sense to them as compared to the Cree. Although the archetypes in the SAT9 may not be culturally relevant, the idea of writing about the picture may also be inappropriate, as words give the picture a literal meaning, which may lead to misinterpretation by others.

The Cree subjects' response to the UPAP drawings also shows what they can do with pictures, that is they are comfortable in expressing themselves through art and they can more easily identify with their feelings. All Cree subjects, in contrast to none of the nonCree subjects, complied immediately with completing the drawings, and they did not

question the purpose of the UPAP. Although traditionally art appeared in different forms, whether in realistic, ornamental and decorative designs, art continues to play a role in Cree life, especially during important occasions in the bushcamp, where decorative ceremonial hides are painted on and hung (Phillips, 1987). In addition, contemporary Cree artists derive inspiration from traditional forms, like depicting Cree legends and symbols (Patterson, 1973), which continue to play a significant role in the everyday life of the Cree.

Chapter 8 - Conclusion

> Speech is a major avenue of communication in the psychotherapeutic situation, yet communication involves all avenues of expressiveness (Appelbaum, 1966, p. 471).

The aims of this study were to test the possibility that cultural differences in styles of emotional expression may be manifested as differences on measures of psychological mindedness. Specifically, that the Cree, a group described as reticent and taciturn (Preston, 1976; Darnell, 1988), will appear more alexithymic than a comparison group of Euro-Canadians. This difference, however, may be restricted to verbal or literal measures of psychological mindedness. There may be less difference when the Cree are tested with a pictorial measure of alexithymia, which does not depend on their verbal skills or willingness to explicitly label emotions and psychological states. If so, this would indicate that the alexithymia measure is of limited use among the Cree. If , on the other hand, the alexithymia measure is found to be valid among the Cree, it should relate to somatic symptoms in a similar fashion as has been hypothesized among Euro-Canadians. If it does not, we would have reason to question not the measure, but the underlying construct itself.

In this concluding chapter, I will first summarize the principle findings on the verbal and pictorial measurements of alexithymia among the Cree. Next, I will consider the implications of the findings for the assessment of psychological mindedness among

the Cree, for the theory and measurement of alexithymia in general, and the relevance of art therapy as a culturally appropriate method of treatment. Finally, I will discuss the limitations of the present study and avenues for future research.

Culture and the measurement of psychological mindedness

The TAS and the first two of its factors were internally consistent in both Cree and nonCree or Euro-Canadian groups. The third factor had only poor internal reliability but, again, results were similar for Cree and nonCree groups. The mean, range and standard deviation of the TAS and its factor scales were similar between Cree and nonCree groups as well, except for TAS Factor 1 (difficulty identifying bodily sensations and feelings) on which the Cree scored significantly higher (i.e. they had more difficulty) than the nonCree. This suggests that the TAS was understood and responded to similarly in the two groups and so, is a potentially reliable measure. Further, there was some indication of a cultural difference on a factor subscale of the TAS, with the Cree reporting more difficulty in identifying feelings and bodily sensations, a major component of alexithymia.

However, the effort to match the Cree and nonCree groups on age, gender and education was only partially successful in that the mean level of education in the Cree group was one year less than that of the nonCree. Since education was found to be substantially negatively correlated with the TAS, as well as with TAS Factors 1 and 2, this group difference could be accounted for by education. Indeed, in multiple regression analysis, control for age, gender and education eliminated the effect of ethnocultural

group.

Since the Cree have been characterized as taciturn (Darnell, 1981, 1988) and as valuing restraint in communication (Preston, 1976), I examined the relationship between a measure of conscious emotion suppression and alexithymia. The emotion suppression scale had higher internal reliability among the Cree than the nonCree, suggesting that the items tapped a culturally salient construct. Further, emotion suppression was more strongly related to the TAS and its first two factors among the Cree than among the nonCree. This may reflect the higher internal consistency of the emotion suppression scale among the Cree or indicate that alexithymia itself, at least as measured by the TAS, is more closely related to conscious emotion suppression among the Cree than among Euro-Canadians.

In the multiple regression analysis of the TAS, the results indicated that lower levels of education are associated with higher scores on the TAS, when age, gender, and cultural group were controlled. The effect of education was eliminated by depressive symptomatology, while an effect of gender was uncovered. This probably means that at any given level of dysphoric affect, men experience more confusion about what they are feeling than women. However, since women experience more depressive symptoms, this relationship remains hidden unless depressive symptoms are controlled.

The TAS Factor 1 was associated with higher levels of somatic symptom reporting even when gender was controlled. The association between female gender and higher levels of somatic symptom reporting was not entirely due to differences in TAS Factor 1. Once TAS Factor 1 is controlled, ethnicity became a significant determinant

of somatic symptom level; that is, for comparable levels of TAS Factor 1 and depression within genders, the Cree reported less somatic symptomatology. This suggests that the Cree, in fact, are less likely to somatize depression.

Another finding in the multiple regression analysis was that higher levels of somatic symptom reporting were related to being nonCree, female, greater emotion suppression, higher levels of depressive symptomatology and to the TAS and TAS Factor 1. These results suggest that depression is positively associated with somatic symptom reporting, emotion suppression, alexithymia and the female gender.

Emotion suppression was associated with higher levels of somatic symptom reporting, even when gender was controlled. The effects of emotion suppression and gender on higher levels of somatic symptom reporting may be due to higher levels of depressive symptomatology. In other words, when one gets more depressed, he/she reports more somatic symptoms and more emotion suppression, and women are more likely to be depressed.

To examine psychological mindedness by an alternate, less purely verbal measure, I used the SAT9. The SAT9 measure presents the subject with nine symbolic stimuli, which must be integrated into a drawing and an accompanying explanation (Demers-Desrosiers, 1982). The original scoring method for the SAT9 used a discriminant function, which has never been validated on a sample other than the one on which it was developed (Cohen, 1984). Accordingly, I developed a simpler scoring method with face validity. To create a measure of pictorial complexity, I counted the discrete elements employed in the picture. Similarly, I counted the discrete elements employed in the

verbal explanation given to the picture. Finally, I created a measure of the ratio of verbal explanation to pictorial detail. These measures showed moderate internal consistency in both Cree and nonCree groups, although the measure of elements in the verbal explanation was less internally consistent among the Cree. There were no significant differences between Cree and nonCree in either the pictorial elements, explanation elements or the ratio of explanation elements to drawing elements. The measure of explanatory detail was unrelated to the TAS, while the measure of pictorial details was negatively correlated. These results would seem to contradict the notion of alexithymia as a global deficit in symbolic expression.

To examine the Cree response to a less structured pictorial task, I administered the UPAP, a procedure in clinical evaluations for art therapy to a subsample of Cree and nonCree subjects. The UPAP is a semi-structured method of assessing clients' psychological status and ability to make use of art materials. The UPAP procedure produced several interesting findings. The Cree subjects found the less structured format of the UPAP more culturally appropriate than that of the SAT9 and appeared to have an easier time getting involved than the Euro-Canadians. When asked to reproduce directions of movement by drawing on paper, the Cree tended to draw a picture of a person performing the actions rather than an abstract representation, as was common among the Euro-Canadians. This may represent either a difference in cognitive style (e.g. field dependence) (Berry, 1976), a general tendency to use less abstract methods of representation except for the domain of sacred knowledge, or a more specific tendency toward the salience of the human figure in the Cree representation of action.

All of the Cree subjects chose to draw a picture rather than a freeform scribble, when given the choice. Again, this may reflect a tendency to avoid more abstract, nonrepresentational forms of artistic expression or a specific avoidance of formless drawing, which is associated with dreaming and seeking the meaning of visions (Patterson, 1973; Speck, 1977). Given this preference for figural drawing rather than scribbling, the hesitancy among the Cree subjects to engage with the SAT9 must be a response either to the high degree of structuring of the task or the cultural specificity of the SAT9 symbolic stimuli, some of which were somewhat alien to the Cree subjects.

Overall, the Cree showed through the UPAP that they are comfortable in expressing themselves through art. From my clinical experience with the Cree and art expression (Ferrara, 1991b, 1994) and from the Cree subjects' response to the free drawing tasks of the UPAPs in this study, the Cree do appear to find art an acceptable means of emotional release or expression. All Cree subjects who completed the UPAPs and the drawing of the SAT9 expressed a sense of comfort at the end of the completion of the drawings and their guardedness diminished as most became more verbally expressive afterward. It is not only in art that the Cree are comfortable in expressing their feelings, but also after the art-making process, they appear to be less guarded and more emotionally expressive at the verbal level. The artwork helps elicit emotional expression and it acts to establish a sense of comfort, at least in the testing milieu.

Implications of Study

The TAS appeared to have just as good internal consistency among the Cree as

among the matched sample of Euro-Canadians. This might suggest it is a valid research or clinical indicator of the alexithymia construct among the Cree. However, the TAS was substantially related to education. Among the Cree, it was also strongly related to a measure of conscious emotion suppression. Attributing a high score on the TAS by a Cree to unconscious conflicts or deficits related to alexithymia then, may be misleading since it may simply reflect less formal education and/or a conscious style of emotion suppression or restraint.

The SAT9, while displaying acceptable internal consistency, correlated with the TAS in the opposite of the expected direction, and was completely unrelated to emotion suppression and somatic symptoms, indicating that the TAS and the SAT9 are measuring substantially different constructs. There is no indication that the SAT9 in its present form is a valid indicator of alexithymia.

The study revealed more fundamental problems with the construct of alexithymia. First, alexithymia was only modestly related to somatic distress. Further, alexithymia was more strongly related to levels of depressive symptomatology. Since this effect is strongest for the TAS factor involving difficulty identifying feelings and bodily sensations, it is possible that depression causes many confusing sensations, which are inherently difficult to label and identify.

In regards to the issue of psychological mindedness, this research has led to a revision of my approach to psychological mindedness in relation to its validity within a cultural framework. This research has shown that it is vital to look at different levels of emotional experience, that is, the organization of emotions, expression and

communication of emotion. The concept of psychological mindedness appears to conflate different aspects of emotional experience. It is crucial to consider the different levels of emotional experience especially in cross-cultural analysis because one level may be more prominent and culturally relevant than another level. For example, in my clinical experience with the Cree (Ferrara, 1991b, 1994), it was noted that the organization of emotion, symbolized in their art expressions, plays a more prominent role than verbal expression of emotion. It may be interesting and useful to have scales developed to address these different levels of emotional experience specifically to assess constructs like alexithymia and psychological mindedness.

The concept of psychological mindedness should be expanded to include levels of emotional awareness, levels of thinking and attributional style as was done in this study (Table A). This expansion within a cultural framework would help delineate what approach would be more appropriate in addressing the problems of client's emotional experience. For example, a Cree client could be self-reflective and show high-level thinking (Pennebaker, 1989), yet have difficulty or feel uncomfortable with describing his/her feelings. It is common practice for the Cree to attribute their feelings to external factors and they may manifest an emotional and somatic stoicism, in which they may bear depression more stoically than Euro-Canadians. Although these are all different traits of psychological mindedness and some are situational, it is important to assess a client's emotional experience using a broader focus, considering the different aspects of the construct of psychological mindedness.

As Prince (1993) found in his work as a psychiatrist among the James Bay Cree,

this research also suggests that the lack of verbalization of emotion is not essentially a Cree character trait but may be more a function of context. This was shown in their feeling at ease in expressing themselves verbally after creating the UPAP drawings, which is often the case with Amerindian clients in art therapy (Lofgren, 1981; Dufresne, 1990). Traditionally, the Cree were socialized to not express themselves in the bush settings, where experiences did not need to be put into words because the feelings were common among the bushpeople (Prince, 1993; Bernstein, 1964). Bernstein (1964) referred to this communicative style as a "restricted code." This tacit or restricted code is defined not as a deficit but as a shared experience within a community where a lot goes without saying (Bernstein, 1964).

The study helped highlight the issue of whether verbalizing the appropriate emotion terms gives a true indication of psychological mindedness. We need to expand the concept of psychological mindedness to include other modes of emotional expression, including the nonverbal to help address the experience of individuals from cultures where reticence is the norm. Perhaps we need to explore the Cree people's use of language outside the psychological domain, and in this exploration we will find that they use many emotion terms (Scott, 1993). Perhaps they are not as reticent in other cultural settings, like the bushcamp or traditional rituals. As well, emotional reticence may be highly situational. We need to explore whether reticence is found in all areas of interaction or only when the Cree are approached with explicit questions or comments related to the psychological domain and asked to express their emotions verbally.

It has been my experience with the Cree as well as the experience of others,

(Ferrara, 1994; Prince, 1993; Scott, 1993), that once a sense of interpersonal comfort is achieved, the Cree communicative pattern is not reserved. As social scientists, we may need to revise our evaluation procedures to incorporate culturally appropriate assessments, like pictorial measures like the UPAP for the Cree, for example. The Cree, who clearly have their own culturally normative emotional symbols, may need to be approached by the clinician through ways that are culturally appropriate, such as art expression. Art-making and the artwork itself helps the Cree to recognize, label, interpret, and organize their feelings.

This study implies that the field of art therapy, art expression may contribute to the understanding of the concept of alexithymia, as a previous study has also shown (Heiman, et al., 1994). Those who are unsuitable for psychotherapy may be better candidates for art psychotherapy. Art therapy may be a selected treatment mode to help address the needs of an alexithymic. In art therapy, artistic dialogue, with its other-centered orientation, facilitates emotional expression (McNiff, 1992).

In the art therapy context, imagery provides a useful aid to communicate and to integrate feelings, especially with culturally different clients (Westrich, 1994). All expression, whether it be verbal, nonverbal or visual, is affected by culture and so, it is essential that the art therapist be aware of the impact culture has on images, color, forms and symbols (Cattaneo, 1994). In the art therapeutic milieu, art should always be viewed as a vehicle for expressing characteristic patterns of meaning and experiences in a culture. The artist's cultural background has a direct effect on what elements are represented and how they are transformed in the artwork.

Art is clearly a relevant issue in relation to alexithymia because of the domain of symbolic processing. In terms of the global relationship between the Cree, art and alexithymia, this study suggests that there is a different type of symbolic processing involved in art-making and in alexithymia with the Cree. The Cree may not easily express their emotions verbally, yet they feel more comfortable in expressing themselves through art. There is some kind of differentiation of skills or functions among the Cree. Moreover, in the Cree sociocultural context, it appears that verbal expression is discouraged while art expression is encouraged (Phillips, 1987; Speck, 1977).

As Preston (1975) also sets forth, events reported in narratives may sometimes be remembered more as visual images than as words, with the Cree. Verbal expression is discouraged in Cree society and there is less prohibition to express their feelings through art. To the Euro-American assessor, the Cree may appear less psychologically-minded and/or alexithymic. This raises the possibility of "pseudo-alexithymia", where the Cree may appear alexithymic because they do not readily verbally express their emotions. Therefore, the role that art plays is that it detours prohibitions to go beyond "pseudo-alexithymia."

Limitations of Study

Although this study contributes to cross-cultural research in relation to psychological mindedness, it has inherent limitations. First, the measures are all derived from the Western perspective. It would have been interesting and more relevant if the scales were translated in Cree and then back-translated to check for discrepancies

(Brislin, 1986). In the translation of the consent form from English to Cree, some interesting cultural differences emerged. For instance, the translator had difficulty translating the phrase "express their thoughts and feelings" using direct translation because apparently there are no Cree terms for "express." In translating the scales into Cree perhaps we would have discovered what emotion terms are easily translated and those that are not.

A second limitation of this study is that there should have been a broader comparison of Euro-Canadian and Cree in terms of multiple measures of emotional expression. In regards to the projective techniques used in this study, the drawing of the pictures in both the SAT9 and UPAP may be standardized, yet the drawing process is affected by the individual's psychological state. Both the SAT9 and UPAP may only give indirect indications of differences in styles of emotional expression. Although it is a standardized procedure, the UPAP may be considered as impressionistic.

Other limitations included the small sample size and the non-random nature of the sample. The present study may also not be considered a fair test of alexithymia because the subjects were matched on education and this resulted in small variation. Very likely, the less educated one is, the less vocabulary one has to sort out feelings.

Imagery and art expression are founded upon cultural context and culture also has an impact on the process of symbolization and expression within the testing context. For instance, in this present study, there was the artificial situation of the art therapy measure for some subjects and the drawing task involved in the SAT9 for all the subjects. These are formal tasks that may stem from outside the subject's culture, which may have

influenced the manner in which the tasks were completed and consequently, affected the results.

Further cross-cultural research is warranted to construct a more well-rounded understanding of cultural differences in emotional expression. Exploratory research to try to understand the way Cree may resort to traditional art to express their feelings could have added another dimension to the qualitative analysis. Traditional art products could have been shown to the Cree subjects to see what the artwork evoked in them. In addition, Cree artists could have been interviewed to see if and how explicit feelings and psychological notions are introduced in their art.

Nonetheless, as expected, this study helped clarify the clinical relevance of differences in styles of emotional expression and self-perception among the Cree. It identified potential sources of ethnocentric bias in clinical assessment. Further, it indicated the relevance of pictorial and nonverbal methods of communication in cross-cultural psychological assessment and treatment.

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APPENDICES

Sex: M / F Age: Date: ID #:

TAS-20

Using the scale provided as a guide, indicate how much you agree or disagree with each of the following statements by circling the corresponding number. Give only one answer for each statement.

Circle 1 if you STRONGLY DISAGREE
Circle 2 if you MODERATELY DISAGREE
Circle 3 if you NEITHER DISAGREE NOR AGREE
Circle 4 if you MODERATELY AGREE
Circle 5 if you STRONGLY AGREE

	Strongly Disagree	Moderately Disagree	Neither Disagree Nor Agree	Moderately Agree	Strongly Agree
1. I am often confused about what emotion I am feeling.	1	2	3	4	5
2. It is difficult for me to find the right words for my feelings.	1	2	3	4	5
3. I have physical sensations that even doctors don't understand.	1	2	3	4	5
4. I am able to describe my feelings easily.	1	2	3	4	5
5. I prefer to analyze problems rather than just describe them.	1	2	3	4	5
6. When I am upset, I don't know if I am sad, frightened, or angry.	1	2	3	4	5
7. I am often puzzled by sensations in my body.	1	2	3	4	5
8. I prefer to just let things happen rather than to understand why they turned out that way.	1	2	3	4	5
9. I have feelings that I can't quite identify.	1	2	3	4	5
10. Being in touch with emotions is essential.	1	2	3	4	5

	Strongly Disagree	Moderately Disagree	Neither Disagree Nor Agree	Moderately Agree	Strongly Agree
11. I find it hard to describe how I feel about people.	1	2	3	4	5
12. People tell me to describe my feelings more.	1	2	3	4	5
13. I don't know what's going on inside me.	1	2	3	4	5
14. I often don't know why I am angry.	1	2	3	4	5
15. I prefer talking to people about their daily activities rather than their feelings.	1	2	3	4	5
16. I prefer to watch "light" entertainment shows rather than psychological dramas.	1	2	3	4	5
17. It is difficult for me to reveal my innermost feelings, even to close friends.	1	2	3	4	5
18. I can feel close to someone, even in moments of silence.	1	2	3	4	5
19. I find examination of my feelings useful in solving personal problems.	1	2	3	4	5
20. Looking for hidden meanings in movies or plays distracts from their enjoyment.	1	2	3	4	5

AT-9 Test

Using the nine elements listed below, make a drawing which will represent a LINKING TOGETHER of the elements, or an INTEGRATED SCENE.

Make your drawing on the next page. Try not to erase anything.

On the third page, write a small paragraph or story to describe (or explain) what is happning in your drawing.

Finally, fill in the table on page 3. This is simply to label the various elements used in your drawing to aid in identifying the 9 elements used to create the drawing.

D not spend more than 20 or 30 minutes to complete this task.

Make your drawing using the 9 following elements:

1. a fall (any type of "fall")
2. a sword
3. a refuge (a safe place, a lodging)
4. a devouring monster
5. something cyclical (something that turns, changes with time, progresses or reproduces itself
6. a character (a person: man, woman or child)
7. water
8. one animal (a bird, fish, mammal or reptile)
9. fire

The Drawing

The Explanation:

Please list the 9 elements used in your drawing by filling in the blanks at the right side of the page:

1. a fall....._____
2. a sword....._____
3. a refuge....._____
4. a devouring monster....._____
5. something cyclical....._____
6. a character....._____
7. water....._____
8. one animal....._____
9. fire....._____

The following pages contain questions on your experience of symptoms. Please read the instructions and answer ALL questions.

1. Circle the number for each statement which best describes how often you felt or behaved this way – **DURING THE PAST WEEK.**

DURING THE PAST WEEK	RARELY OR NONE OF THE TIME (LESS THAN 1 DAY)	SOME OR A LITTLE OF THE TIME (1-2 DAYS)	OCCASIONALLY OR A MODERATE AMOUNT OF TIME (3-4 DAYS)	MOST OR ALL OF THE TIME (5-7 DAYS)
A. I was bothered by things that usually don't bother me	1	2	3	4
B. I felt dizzy or faint	1	2	3	4
C. I did not feel like eating; my appetite was poor	1	2	3	4
D. I had headaches	1	2	3	4
E. I felt that I could not shake off the blues even with help from my family or friends	1	2	3	4
F. I had pains in my heart or chest	1	2	3	4
G. I felt that I was just as good as other people	1	2	3	4
H. I had pains in my lower back	1	2	3	4
I. I had trouble keeping my mind on what I was doing	1	2	3	4
J. I was nauseous or had an upset stomach	1	2	3	4
K. I felt depressed	1	2	3	4
L. My muscles were sore	1	2	3	4
M. I was happy	1	2	3	4

DURING THE PAST WEEK	RARELY OR NONE OF THE TIME (LESS THAN 1 DAY)	SOME OR A LITTLE OF THE TIME (1-2 DAYS)	OCCASIONALLY OR A MODERATE AMOUNT OF TIME (3-4 DAYS)	MOST OR ALL OF THE TIME (5-7 DAYS)
N. I felt that people disliked me	1	2	3	4
O. I felt that everything I did was an effort	1	2	3	4
P. I had trouble getting my breath	1	2	3	4
Q. I felt hopeful about the future	1	2	3	4
R. I had hot or cold spells	1	2	3	4
S. I thought my life had been a failure	1	2	3	4
T. I had a lump in my throat	1	2	3	4
U. I felt fearful	1	2	3	4
V. I had a heavy feeling in my arms or legs	1	2	3	4
W. I felt sad	1	2	3	4
X. I talked less than usual	1	2	3	4
Y. Parts of my body felt numb or tingling	1	2	3	4
Z. I felt lonely	1	2	3	4
AA. Parts of my body felt weak	1	2	3	4
BB. People were unfriendly	1	2	3	4
CC. My sleep was restless	1	2	3	4
DD. I enjoyed life	1	2	3	4
EE. I had crying spells	1	2	3	4
FF. I could not get "going"	1	2	3	4

Answer each of the following questions by circling either YES or NO. Please answer all questions,

1. When you are upset, do you try not to let your emotions show on your face? NO YES
2. Do you often try to hide your emotions when you are upset? NO YES
3. Can you express your personal feelings easily to other people? NO YES
4. When you are angry, do you tend to bottle up your feelings? NO YES
5. Do you prefer to keep your feelings to yourself? NO YES
6. Is it hard for you to show people your personal feelings? NO YES
7. Do you frequently try to explain to others how you are feeling? NO YES
8. Can people usually tell what you are feeling just by looking at your face? NO YES

THE ULHAN PERSONALITY ASSESSMENT PROCEDURE
Check List (Rev. 7/93)

Name of Examiner _____
Address _____
_____
_____
Phone # _____

Date _____

Examinee: Name _____
Age ____Gender_____
Date of Birth _____
Years of Education _____
Years of Art Experience _____
Occupation _____
Mental Status _____

Rate descriptors on a 1-5 scale (5 being the most, 1 the least). Those that don't apply leave blank.

	Picture 1	2	3	4
LINE				
Even				
Varied				
Broken				
Sweeping				
Light				
Medium				
Pressured				
Thick				
Thin				
Reinforced				
Changed				
Erasures				
SPACE				
Flat				
Shallow				
Deep				
SPACE USE				
Edging				
Whole Page				
3/4 Page				
1/2 Page				
1/3 Page				
1/4 Page				

	Picture 1	2	3	4
COLOR USE				
# of Colors				
Conventional				
Unconventional				
Natural				
Imaginative				
Fantastic				
Integrated				
Nonintegrated				
COLOR APPLICATION				
Mixed				
Umixed				
Light				
Medium				
Dense				
SHADING				
Light				
Dark				
To Define Form				
Arbitrary				
Tonal Variety				
PATTERN				
Large				
Small				
Rhythmic				
Static				

	Picture 1	2	3	4
FORM				
Realistic				
Geometric				
Fantastic				
Defined				
Undefined				
Enclosed				
Open				
Varied				
Repetitive				
2-Dimension				
3-Dimension				
Overlapping				
CONTENT				
Human				
Animal				
Still Life				
Landscape				
Cityscape				
Seascape				
Interior				
Realistic				
Fantastic				
Abstract				
Other				

	Picture 1	Picture 2	Picture 3	Picture 4
Board Direction				
Horizontal or Vertical				
Completion Time				

OVER

THEME (Describe briefly)

Picture 1

Picture 2

Picture 3

Picture 4

OVERALL THEME:

Rev. 5/93 Agell
\WP51\MISC\UPAP\Cklst (also C:\WP51\MISC\SYL91)
SYLLABUS 91: A:\CKLST (also filed on same disk under SYL91)

COVER SHEET

Styles of Expression Study

AGE:_____

SEX: MALE___ FEMALE___

HIGHEST GRADE COMPLETED (CIRCLE AMOUNT OF YEARS IN SCHOOL):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Elementary High School College University

LANGUAGES SPOKEN: ENGLISH_____ FRENCH_____ CREE_____

STUDENT: FULL TIME_____ WORKING: FULL TIME_____
PART TIME_____ PART TIME_____

OCCUPATION:_____

COMMUNITY YOU ARE LIVING IN:_____

FOR RESEARCHER ONLY:

DATE OF COMPLETION:_____

LOCATION:_____

ID_____

Appendix A - Consent Form

Styles of Expression Study

This is a study of how people from different ethnic groups express their thoughts and feelings. We are studying Cree, English and French Canadian people. This research is being conducted by Nadia Ferrara and Dr. Laurence Kirmayer at the Culture and Mental Health Research Unit of the Jewish General Hospital.

Taking part in this study is voluntary. If you agree to participate, you will be given a questionnaire to complete, which will take about 30 minutes of your time. You may also be asked to complete four drawings on an individual basis, which will take another 30 minutes.

We will keep all information about your taking part in this study confidential to the best of our ability. We will not use your name outside this study.

You may refuse to participate in this study at any time. Whether you choose to agree to participate or not will not affect your treatment in any way.

If you have any questions, please ask Nadia Ferrara at (514)932-7161 or Laurence Kirmayer at (514)340-8210.

By signing my name below, I acknowledge that I have been given a copy of this consent form, I have read and understood all of the above points and I agree to participate in this study.

Date:_____ Participant:_____

Witness:_____

** If you would like to receive a summary of the results of this research, please leave your address below and they will be mailed to you.

Appendice A - Formulaire de Consentement

Étude sur les Styles d'Expression

La présente étude s'intéresse aux diverses façons que les gens de différents groupes ethniques utilisent pour exprimer leurs pensées et leurs émotions. Nous étudions des Cris, des Canadiens anglais et des Canadiens français. Cette recherche est dirigée par Nadia Ferrara et Dr. Laurence Kirmayer de l'Unité de recherche sur la culture et la santé mentale de l'Hôpital Général Juif.

Votre participation est volontaire. Si vous acceptez de participer, nous vous remettrons un questionnaire à compléter, ce qui prendra environ 30 minutes de votre temps. Il est possible qu'on vous demande de compléter quatre dessins sur une base individuelle, ce qui prendra 30 minutes supplémentaires.

Nous ferons de notre mieux afin de garder toutes les informations obtenues dans le cadre de cette étude confidentielles. Votre nom ne sera aucunement mentionné en dehors de l'étude.

Vous pouvez choisir de ne plus participer à cette recherche à n'importe quel moment. Votre acceptation ou votre refus de participer n'affectera en rien votre traitement.

Si vous avez des questions, n'hésitez pas à contacter Nadia Ferrara (514)932-7161 ou Laurence Kirmayer (514)340-8210.

En signant ci-dessous, je reconnais avoir reçu une copie de ce formulaire de consentement, avoir lu et compris tous les points mentionnés ci-dessus et consens à participer à cette étude.

Date: _____ Nom du participant: _____

Témoin: _____

** Si vous désirez recevoir un résumé des résultats de cette étude, s'il vous plaît inscrire votre addresse ci-dessous afin que l'on vous envoie une copie.

ᓂᓪᓚᔨ ᐊᓐᓇᔨ ᐅᓐᓄᓐ ᐊᓐᐃᓐ ᐊᐃᑎᒥᒋᑦ

ᐊᓂᔪ ᑎᓴᐃᓯᖏᓂᐃᓕᓐ ᓂᓪᓚᔨ ᐊᓐᓇᔨ ᐅᓐᓄᓐᓄ ᐊᓐᐃᓐ ᐊᐃᑎᒥᒋᑦ ᑭᖅ ᐊᐃᓯᐃᑦᒥᓂᑦ ᐊᓕᑎᓴᐅᓂᓐ ᐃᓕᓴᐅᓐ, ᐅ ᐊᓐᐃᓐ ᓴᓂᔪᓴᐅᑎᓄᓐ ᓇᑎᖅ ᐲᐃᓯᓐ ᑭᖅ ᓂᔪᔨᓂᓐ ᑭᓚᒋᑦ ᐊᐅᓐ ᔪᐃᓐ ᓂᔪᔨᒥᒋᓂᐊᓕᒥᓐ ᐅᒋ.

ᓇᓴᔨᓇ ᓄᑦ ᐅᓂᒃᐃᓐᐊᐃᓐ

1. ᓇᑎᖅ ᕿᓚᖃ ᒥᑭ ᒫᐃᑯ ᓇᐧ ᔨᓂᐧᑲᐅᔨᑦᐃᓐ ᓄ ᓂᓪᑲᐅᔪᑦᐊᓐ ᒥᑯ ᓱᖅ 30 ᐲᔨᓪ 45 ᒥᓂᔨᔪᖃᐧ ᒪᑭᑦᓐ, ᐧᑲᐧᔪᓐ ᒪᑭᔨᑎᒥᔨᐃᓐ ᓇᐧ ᓄᒋᔪᑎᒥᓐ ᐊᐦᑦ ᒫᓱᑦᐅᓂᒥᐊᑎᓐ ᑎᑦ ᐊᐃᑦᐃᑦᐊᒥᔨᐃᓐ ᒥᑯ 30 ᒥᓂᔨᔪᖃ ᐃᓪᐱᓪ.

2. ᒥᔨᐃ ᐅ ᓱᐃᔨ ᐊᓂᔪᒋᓄᓴᖏᓂᐅᑎᓄ ᐃᔨᓴᐧᑲ ᑭᑎᔪᑕᑭᓇ ᓱᐧᐃᖅ ᐊᐧᐃᓐ ᑭᐧᐃᐊᑎᓄ ᑭᖅ ᓄ ᐊᑕᐱᔨᒥᓂᑭᖏᓂᐅᑎᓄ ᐊᓐᑕ ᐊᓐ ᓄᑭᓂᐧᐃᑎᐱᓄ ᐅ ᒥᔨᓂᐧᐃᓄᑭᒥᔨᓐ.

ᓂᔪᐃ ᓇᓪᑎᓄ ᐧᐃᓴᓪᐧ ᑭᑭ ᒋᓄᔨᓐ ᐊᓐ ᓄ ᐅᔪᑦᖏᓂᐃᓕᓐ ᒥᔨᓂᐧᐃᓄᑭᓐ.

ᓇᓴᔨᓇ ᓄᑦ ᐧᐃᑭᐧᐃᑭᐧᐃᐊᓐ ᓂᔪᐃ ᑭᖅᐧᐃᓄᓄᔨᐧ ᐊᓐ ᐧᐃᐃᓐ ᐊᓂᔪᐃᑦᐃᑭᑭᓐ ᐊᓐᑕ ᐊᐃᑕᔨᓐ.

ᐊᑎᑐ ᐧᐃᑭᓄᔨᓂᒥᓇ ᓄᐧᑲᓐ ᑲᐧᐃᐃ ᔪᐧᑲᐃᒧ ᓄᐧᑲᒥᒋᑦ ᓇᓪᑎᓄ ᒥᑭᑦᓐ ᐊᓐᐃᓐ ᐊᐃᒥᑕᐃᓐ ᑭᖅ ᐊᓂᔪᑎᓂᒥᓐ ᑲᑦ ᐧᑲᐧᐃᐃᓐ ᐅᓐᓄᓐᓄ ᐧᐃᐧᐃᑭᑭᓐ ᐅ ᐧᐃᐃᓐ ᓇᓴᐃᓯᖏᓂᐃᓕᓐ ᓄᐧᑲᐧᐃᐃᓐ.

514-932-7161 ᑭᖅ ᓚᐧ ᐊᓐ ᐊᓂᔪᐃᓴᔨᓐ ᐧᒋᓚᔨᓐ ᐧᑭᓪᓕᑦ 514-340-8210 ᒥᔨᓂᐅᓴᐃᓇᓇ ᐅᑦ ᓂᒋᐧᐃ ᐅ ᒥᔨᓂᐧᐃᑭᓐ ᓄ ᓇᓂᔨ ᐊᒋᐧ ᒪᔨᑦᐃᓐ ᐊᒋᐧ ᐊᔨᒥᑕᐃᓐ ᑭᖅ ᐊᓂᔪᑎᓂᒥᒋᓐ ᓄᒋ ᐧᐃᑭᓐᐊᐃᓐ ᐅ ᐧᐃᐃᓐ ᓇᓂᔪᓄᑦᐃᑭᑭᓇᐧᐃᓐ.

ᐱᔨᓪ ᐊᐃᑎᔨᐧᑲᒋᑦ _____

ᐧᐃᑭᓂᐃᐧᐃᑦ _____

ᑲᑭᓂᐧᐃᐱᔨᓂᐧ _____

ᓇᐃᔪᐧᐃᐃᑎᓇᓇ ᐅ ᑲᐃᔨ ᓂᔪᔨᑎᒥᓴᖏᓂᐃᓕᓐ ᐊᑦ ᐃᔨᐱᐃᓐ ᓄ ᐱᑎᔨᑎᓂᒥᓐ ᐅᑦ ᓂᒋᔨ ᐊᓐᑕ ᐧᐃᑭᐧᐃᐃᓐ ᐅᓐᓄᓐᓄ ᐃᓕᓐᓄᑦᐃᑭᓐᓄᓐ.

TABLES

TABLE A

CONCEPTS AND MEASURES OF PSYCHOLOGICAL MINDEDNESS

COMMON DIMENSIONS AMONG CONCEPTS		LEVELS OF EMOTIONAL AWARENESS (Lane & Schwartz, 1987)	LEVELS OF THINKING (Pennebaker, 1989)	ATTRIBUTIONAL STYLE (Robbins & Kirmayer, 1991)	ALEXITHYMIA (Sifneos, 1973)
		Scale/Measure: Levels of Emotional Awareness Scale	Scale/Measure: Levels of Thinking - Five-point scale, 1=low-level thinking, 5= high-level.	Scale/Measure: Sympton Interpretation Questionnaire (SIQ)	Scale/Measure: (*only those used in this study) (1) TAS20 (Bagby, Parker & Taylor, 1994) (2) SAT-9 (Cohen, Demers-Desrosiers, & Catchlove, 1983).
	(1) Lack of self-reflection, incapacity for introspection.	+ (in sensorimotor reflexive/bodily sensation)	+ (in low-level thinking)	-	+
	(2) Feelings are attributed to external factors.	-	+ (in low-level thinking)	+	+
	(3) Broad perspective, self-reflective thoughts & reference to one's emotions and moods.	+ (in concrete operational/awareness of blends of feelings)	+ (in high-level thinking)	-	-
	(4) Affective arousal is somatized.	+ (in sensorimotor reflexive/bodily sensation & sensorimotor enactive)	+ (in low-level thinking)	+	+
	(5) Inability to describe feelings, & inability to distinguish emotions from feelings.	+ (in sensorimotor reflexive & sensorimotor enactive)	+ (in low-level thinking)	+	+

+ = dimension present in definition of concept
- = dimension not present in definition of concept

TABLE B

HISTORICAL PRECURSORS OF ALEXITHYMIA

CHARACTERISTIC TRAITS	"INFANTILE PERSONALITY" (Ruesch, 1948)	"PATIENTS UNSUITABLE FOR PSYCHOTHERAPY" (Shands, 1958)	"PENSÉE OPÉRATOIRE" (Marty & deM'Uzan, 1963)	"ALEXITHYMIA" (Sifneos, 1973; Taylor,1984;McDougall,1982)
	- Infantile character externalizes feelings & emotions because of inner sense of distrust. Inability to rely on own feelings and perceive own reactions. Projects feelings onto others.	- inability to describe feelings.	- consists of a lack of emotional contact with the interviewer. - patients are described as lack of affect, impoverished, narrow and object-bound.	- characteristics similar to pensée opératoire, as well as: - difficulty in identifying and describing feelings;
	Self-expression "occurs on either the level of action or organ expression, especially with regard to tension" (p.136). - somatization of feelings becomes only means available for tension discharge.	Patients appear "blank" when asked about feelings instead refer to a number of bodily sensations. Impaired ability to use the "I" pronoun in an emotionally significant context.	Engage in operational behavioral, and have a tendency to somatize feelings. As a result, strong lack of awareness of inner world. - cognitive style is concrete and reality-based, and not related to unconscious fantasies. Pragmatic, concrete, and unimaginative.	- difficulty in distinguishing between feelings and bodily sensations of emotional arousal; - restricted imaginative processes, manifested by a paucity of dreams and fantasies. - involves defensive operations (McDougall, 1982).

Table 1 – Sociodemographics

	CREE (N=36) $\bar{x}$ (SD) or %	NONCREE (N=36) $\bar{x}$ (SD) or %	Significance Test
AGE	36.3 (6.82)	36.1 (6.88)	NS
EDUCATION	11.53 (2.01)	12.58 (1.76)	$t = 2.37$ $p = 0.02$
OCCUPATION	4.55 (1.78)	5.03 (2.05)	NS
GENDER (% female)	58.3%	58.3%	NS
ENGLISH	97.2%	97.2%	NS
FRENCH	27.8%	83.3%	$x^2 = 22.5$ $p < 0.001$
CREE	88.9%	0%	$x^2 = 57.6$ $p < 0.001$
STUDENT: Full–Time Part–Time	 11.1% 2.8%	 5.6% 8.3%	 $x^2 = 0.73$ $p = 0.39$ $x^2 = 1.06$ $p = 0.30$
WORK: Full–Time Part–Time	 77.8% 11.1%	 75% 13.9%	 $x^2 = 0.08$ $p = 0.78$ $x^2 = 0.13$ $p = 0.72$

NOTE:
- $\bar{x}$ (SD) = MEAN (STANDARD DEVIATION)
- t = t TEST
- p = p VALUE
- x^2 = CHI SQUARE

Table 2 - Measures of Styles of Emotional Communication & Symbolization

Reliability Analysis
- Cronbach's Alpha -

	CREE (N=36)	NONCREE (N=36)	ALL (N = 72)
TAS - 20	0.88	0.78	0.84
TAS - 20 FACTOR 1	0.85	0.85	0.85
TAS - 20 FACTOR 2	0.81	0.71	0.76
TAS - 20 FACTOR 3	0.54	0.50	0.51
EMOSUP	0.86	0.71	0.79
SAT-9D (Elements in drawing)	0.78	0.82	0.80
SAT-9E (Elements in explanation)	0.61	0.82	0.76

TAS-20 = Toronto Alexithymia Scale
EMOSUP = Emotion Suppression Scale
SAT-9 = Scored Archetypal Test 9

Table 3 - Measures of Styles of Emotional Communication & Symbolization

Comparison of Groups

	CREE (N=36) (SD)	NONCREE(N=36) (SD)	Significance Test
TAS - 20	49.2 (13.5)	45.44 (10.34)	t = 1.32 p = 0.19
TAS - 20 FACTOR 1	16.2 (6.42)	13.3 (5.9)	t = 2.0 p = 0.049
TAS - 20 FACTOR 2	13.7 (4.6)	13.1 (4.5)	t = 0.57 p = 0.57
TAS - 20 FACTOR 3	19.2 (4.6)	19.0 (4.14)	t = 0.22 p = 0.83
CES-D	33.9 (7.7)	32.8 (11.6)	t = 0.49 p = 0.63
SCL-90R	15.4 (3.4)	17.3 (6.2)	t = 1.64 p = 0.10
EMOSUP	12.3 (2.8)	12.7 (2.2)	t = 0.75 p = 0.46
SAT-9D (Elements in drawing)	6.1 (4.1)	7.1 (4.8)	t = 0.92 p = 0.36
SAT-9E (Elements in explanation)	6.0 (3.1)	7.0 (4.7)	t = 1.06 p = 0.29
SAT-9 RATIO (Explanation / Drawing)	1.04 (0.8)	1.15 (1.8)	t = 0.33 p = 0.74

(SD) = MEAN (Standard Deviation)
TAS-20 = Toronto Alexithymia Scale
CES-D = Center of Epidemiologic Studies Depression Scale
SCL-90R = Modified Version of the Somatization Subscale
EMOSUP = Emotion Suppression Scale
SAT-9 = Scored Archetypal Test 9

Table 4 - Pearson Correlation Matrix Among Measures of Psychological Mindedness Sociodemographics, Cultural Group and Symptomatology

	TAS	TAS FACTOR 1	TAS FACTOR 2	TAS FACTOR 3	EMOTION SUPPRESSION	SAT9 RATIO
AGE	-0.12	-0.10	-0.06	-0.13	0.02	-0.07
GENDER 0=female 1=male	0.05	0.02	-0.04	0.17	0.13	-0.21*
EDUCATION	-0.33**	-0.27**	-0.31**	-0.19	-0.24*	0.02
GROUP 0=nonCree 1=Cree	0.16	0.23*	0.07	0.03	-0.09	-0.04
CES-D	0.54***	0.57***	0.45***	0.19*	0.28**	0.09
SCL-90R	0.20*	0.29**	0.09	0.03	0.21*	0.07

*P ≤ 0.05 **P ≤ 0.01 ***P ≤ 0.001

TAS = Toronto Alexithymia Scale
CES-D = Center for Epidemiologic Studies Depression Scale
SCL-90R = Modified Version of the Somatization Subscale
SAT9RATIO = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

Table 5 - Pearson Correlation Matrix Among Measures of Psychological Mindedness for the Whole Sample (N=72)

	TAS FACTOR 1	TAS FACTOR 2	TAS FACTOR 3	Emotion Suppression	SAT9D	SAT9E	SAT9 RATIO
TAS	0.87***	0.78***	0.70***	0.54***	-0.24*	0.06	0.27*
TAS FACTOR 1		0.54***	0.41***	0.41***	-0.13	0.12	0.24*
TAS FACTOR 2			0.34***	0.55***	-0.20	0.07	0.21
TAS FACTOR 3				0.32*	-0.25*	-0.07	0.19
Emotion Suppression					-0.15	0.02	0.02

*P ≤ 0.05 **P ≤ 0.01 ***P ≤ 0.001

TAS = Toronto Alexithymia Scale
SAT9D = Scored Archetypal Test 9, elements in drawing
SAT9E = Scored Archetypal Test 9, elements in explanation
SAT9RATIO = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

Table 6 - Pearson Correlation Matrix Among Measures of Psychological Mindedness for the Non-Cree Subgroup (N=36)

	TAS FACTOR 1	TAS FACTOR 2	TAS FACTOR 3	Emotion Suppression	SAT9D	SAT9E	SAT9 RATIO
TAS	0.85***	0.69***	0.52***	0.33*	-0.20	0.22	0.39*
TAS FACTOR 1		0.45*	0.21	0.16	-0.05	0.22	0.31
TAS FACTOR 2			-0.00	0.38*	-0.15	0.25	0.27
TAS FACTOR 3				0.18	-0.26	-0.03	0.22
Emotion Suppression					0.07	0.24	0.03

*P ≤ 0.05 **P ≤ 0.01 ***P ≤ 0.001

TAS = Toronto Alexithymia Scale
SAT9D = Scored Archetypal Test 9, elements in drawing
SAT9E = Scored Archetypal Test 9, elements in explanation
SAT9RATIO = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

Table 7 - Pearson Correlation Matrix Among Measures of Psychological Mindedness for the Cree Subgroup (N=36)

	TAS FACTOR 1	TAS FACTOR 2	TAS FACTOR 3	Emotion Suppression	SAT9D	SAT9E	SAT9 RATIO
TAS	0.89***	0.86***	0.83***	0.70***	-0.25	-0.06	0.21
TAS FACTOR 1		0.63***	0.58***	0.65***	-0.19	0.06	0.20
TAS FACTOR 2			0.63***	0.71***	-0.26	-0.15	0.15
TAS FACTOR 3				0.42*	-0.23	-0.12	0.18
Emotion Suppression					-0.40*	-0.27	-0.00

*P ≤ 0.05 **P ≤ 0.01 ***P ≤ 0.001

TAS = Toronto Alexithymia Scale
SAT9D = Scored Archetypal Test 9, elements in drawing
SAT9E = Scored Archetypal Test 9, elements in explanation
SAT9RATIO = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

Table 8 - Multiple Regression Model of the Toronto Alexithymia Scale

Model I - Effect of Sociodemographics and Ethnicity on Alexithymia

	r	B	β
Sociodemographics: Age	-0.12	-0.24	-0.14
Gender (0=female, 1=male)	0.05	1.78	0.07
Education	-0.33**	-1.94**	-0.31
Group (0=NonCree, 1=Cree)	0.16	1.75	0.07
Constant		77.93	
R^2			0.13

Overall $F = 2.59$ ($p < 0.05$)

** $P < 0.01$
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 9 - Multiple Regression Model of the Toronto Alexithymia Scale

Model II- Effect of Sociodemographics, Ethnicity and Depression on Alexithymia

	r	B	β
Sociodemographics: Age	-0.12	-0.09	-0.05
Gender (0=female, 1=male)	0.05	4.9*	0.20
Education	-0.33**	-1.15	-0.18
Group (0=NonCree, 1=Cree)	0.16	1.81	0.07
Symptomatology: CES-D	0.54***	0.65***	0.53
Constant		39.51	
R^2			0.37

Overall $F = 7.83$ ($p < 0.001$)

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

CES-D = Center for Epidemiologic Studies Depression scale
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 10 - Multiple Regression Model of the Toronto Alexithymia Scale - Factor 1*

Model I - Effect of Sociodemographics and Ethnicity on Alexithymia

	r	B	β
Sociodemographics: Age	-0.10	-0.10	-0.11
Gender (0=female, 1=male)	0.02	0.42	0.03
Education	-0.27**	-0.74*	-0.23
Group (0=NonCree, 1=Cree)	0.23*	2.15	0.17
Constant		26.22	
R^2			0.11

Overall F = 2.16 (NS)

* P < 0.05 ** P < 0.01

* TAS Factor 1 = Difficulty Identifying Feelings and Bodily Sensations
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 11 - Multiple Regression Model of the Toronto Alexithymia Scale - Factor 1

Model II - Effect of Sociodemographics Ethnicity And Depression on Alexithymia

	r	B	6
Sociodemographics: Age	-0.10	-0.01	-0.01
Gender (0=female, 1=male)	0.02	2.19	0.17
Education	-0.27**	-0.29	-0.09
Group (0=NonCree, 1=Cree)	0.23*	2.18	0.17
Symptomatology: CES-D	0.57***	0.37***	0.58
Constant		4.27	
R^2			0.40

Overall F = 8.83 ($p < 0.001$)
* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

TAS Factor 1 = Difficulty Identifying Feelings and Bodily Sensations
CES-D = Center for Epidemiologic Studies Depression scale
r = Pearson Correlation
B = Non-standardized regression coefficient
6 = Standardized regression coefficient

Table 12 - Multiple Regression Model of the Toronto Alexithymia Scale - Factor 2

Effect of Sociodemographics, Ethnicity and Depression on Alexithymia

	r	B	6
Sociodemographics: Age	-0.06	-9.43	-0.001
Gender (0=female, 1=male)	-0.04	0.67	0.07
Education	-0.31**	-0.50	-0.22
Group (0=NonCree, 1=Cree)	0.07	-0.14	-0.01
Symptomatology: CES-D	0.45***	0.19***	0.41
Constant		12.89	
R^2			0.25

Overall $F = 4.35$ ($p < 0.01$)
** $P < 0.01$ *** $P < 0.001$
TAS Factor 2 = Difficulty Describing Feelings and Bodily Sensations
CES-D = Center for Epidemiologic Studies Depression Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
6 = Standardized regression coefficient

Table 13 - Multiple Regression Model of the Toronto Alexithymia Scale - Factor 3

Effect of Sociodemographics, Ethnicity and Depression on Alexithymia

	r	B	e
Sociodemographics: Age	-0.13	-0.07	-0.11
Gender (0=female, 1=male)	0.17	2.03	0.23
Education	-0.19	-0.35	-0.16
Group (0=NonCree,	0.03	-0.23	-0.03
Symptomatology: CES-D	0.19*	0.09	0.20
Constant		22.35	
R^2			0.12

Overall F = 1.82 (NS) * P < 0.05

TAS Factor 3 = Externally Oriented Thinking
CES-D = Center for Epidemiologic Studies Depression Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
6 = Standardized regression coefficient

Table 14 - Multiple Regression Model of the Emotion Suppression Scale

Model I - Effect of Sociodemographics and Ethnicity on Emotion Suppression

	r	B	β
Sociodemographics: Age	0.02	0.003	0.01
Gender (0=female, 1=male)	0.13	0.68	0.13
Education	-0.24*	-0.38*	-0.29
Group (0=NonCree, 1=Cree)	-0.09	-0.84	-0.17
Constant		17.09	
R^2			0.10

Overall F = 1.91 (NS) * P < 0.05

r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 15 - Multiple Regression Model of the Emotion Suppression Scale

Model II - Effect of Sociodemographics, Ethnicity and Depression

	r	B	β
Sociodemographics: Age	0.02	0.02	0.06
Gender (0=female, 1=male)	0.13	1.05	0.21
Education	-0.24*	-0.28	-0.22
Group (0=NonCree, 1=Cree)	-0.09	-0.83	-0.17
Symptomatology: CES-D	0.28**	0.08**	0.30
Constant		12.56	
R^2			0.18

Overall $F = 2.86$ ($p < 0.05$) * $P < 0.05$ ** $P < 0.01$

CES-D = Center for Epidemiologic Studies Depression Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 16 - Multiple Regression Model of the Scored Archetypal Test (SAT9RATIO)

Effect of Sociodemographics, Ethnicity and Depression on Alexithymia

	r	B	β
Sociodemographics: Age	-0.05	-9.44	-0.01
Gender (0=female, 1=male)	-0.24*	-0.27	-0.20
Education	-0.07	0.003	0.01
Group (0=NonCree, 1=Cree)	0.13	0.16	0.12
Symptomatology: CES-D	0.22*	0.01	0.16
Constant		0.61	
R^2			0.10

Overall F = 1.40 (NS) (N = 71, 1 outlier removed) * P < 0.05

SAT9RATIO = The ratio of elements in written explanation per elements in drawing of SAT9

CES-D = Center for Epidemiologic Studies Depression Scale

r = Pearson Correlation

B = Non-standardized regression coefficient

β = Standardized regression coefficient

Table 17 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model I - Effect of Sociodemographics, Ethnicity, EMOSUP*

	r	B	β
Sociodemographics: Age	-0.12	-0.08	-0.10
Gender (0=female, 1=male)	-0.28**	-3.09**	-0.30
Education	-0.03	-0.04	-0.02
Group (0=NonCree, 1=Cree)	-0.19*	-1.77	-0.17
EMOSUP	0.21*	0.46*	0.23
Constant		16.14	
R^2			0.18

Overall F = 2.84 ($p < 0.05$) * $P < 0.05$ ** $P < 0.01$

*EMOSUP = Emotion Suppression Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 18 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model II - Effect of Sociodemographics, Ethnicity and TAS

	r	B	β
Sociodemographics: Age	-0.12	-0.05	-0.07
Gender (0=female, 1=male)	-0.28**	-2.95**	-0.29
Education	-0.03	-0.02	-0.01
Group (0=NonCree, 1=Cree)	-0.19*	-2.33*	-0.23
TAS	0.20*	0.10*	0.24
Constant		16.20	
R^2			0.18

Overall F = 2.89 ($p < 0.05$) * $P < 0.05$ ** $P < 0.01$
TAS = Toronto Alexithymia Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
β = Standardized regression coefficient

Table 19 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model III - Effect of Sociodemographics, Ethnicity, TAS, SAT9RAT

	r	B	β
Sociodemographics: Age	-0.12	-0.05	-0.07
Gender (0=female, 1=male)	-0.28**	-3.13**	-0.30
Education	-0.03	-0.001	-4.22
Group (0=NonCree, 1=Cree)	-0.19*	-2.38*	-0.23
TAS	0.20*	0.11*	0.26
SAT9RAT	0.07	-0.29	-0.08
Constant		15.86	
R^2			0.18

Overall F = 2.46 ($p < 0.05$) * $P < 0.05$ ** $P < 0.01$

TAS = Toronto Alexithymia Scale

SAT9RAT=Scored Archetypal Test 9,ratio of elements in explanation per elements in drawing

r = Pearson Correlation

B = Non-standardized regression coefficient

β = Standardized regression coefficient

Table 20 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model IV - Effect of Sociodemographics, Ethnicity, TAS, SAT9RAT, CES-D

	r	B	β
Sociodemographics: Age	-0.12	-0.02	-0.03
Gender (0=female, 1=male)	-0.28**	-1.66	-0.16
Education	-0.03	0.08	0.03
Group (0=NonCree, 1=Cree)	-0.19*	-2.14	-0.21
TAS	0.20*	0.001	0.002
SAT9RAT	0.07	-0.07	-0.02
CES-D	0.49***	0.24***	0.46
Constant		9.87	
R^2			0.31

Overall $F = 4.19$ ($p < 0.001$) *P < 0.05 ** P < 0.01 *** P < 0.001

TAS = Toronto Alexithymia Scale

SAT9RAT = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

CES-D = Center for Epidemiologic Studies Depression Scale

r = Pearson Correlation

B = Non-standardized regression coefficient

β = Standardized regression coefficient

Table 21 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model V - Effect of Sociodemographics, Ethnicity and TAS Factor 1 (Difficulty Identifying Feelings and Bodily Sensations)

	r	B	ß
Sociodemographics: Age	-0.12	-0.05	-0.06
Gender (0=female, 1=male)	-0.28**	-2.89**	-0.28
Education	-0.03	-0.003	-0.001
Group (0=NonCree, 1=Cree)	-0.19*	-2.78*	-0.27
TAS Factor 1	0.29**	0.29**	0.36
Constant		16.43	
R^2			0.24

Overall F = 4.26 ($p < 0.01$) * $P < 0.05$ ** $P < 0.01$

TAS = Toronto Alexithymia Scale
r = Pearson Correlation
B = Non-standardized regression coefficient
ß = Standardized regression coefficient

Table 22 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model VI - Effect of Sociodemographics, Ethnicity, TAS* Factor 1 (Difficulty Identifying Feelings and Bodily Sensations), and SAT9RAT

	r	B	β
Sociodemographics: Age	-0.12	-0.05	-0.07
Gender (0=female, 1=male)	-0.28**	-3.11**	-0.30
Education	-0.03	0.02	0.01
Group (0=NonCree, 1=Cree)	-0.19*	-2.86*	-0.28
TAS Factor 1	0.29**	0.31**	0.38
SAT9RAT	0.07	-0.37	-0.10
Constant		16.48	
R^2			0.25

Overall F = 3.67 ($p < 0.01$) * $P < 0.05$ ** $P < 0.01$

TAS = Toronto Alexithymia Scale

SAT9RAT=Scored Archetypal Test 9,ratio of elements in explanation per elements in drawing

r = Pearson Correlation

B = Non-standardized regression coefficient

β = Standardized regression coefficient

Table 23 - Multiple Regression Model of a Modified Version of the Somatization Subscale (SCL-90R)

Model VII - Effect of Sociodemographics, Ethnicity, TAS FACTOR 1 (Difficulty Identifying Feelings and Bodily Sensations), SAT9RAT and CES-D

	r	B	β
Sociodemographics: Age	-0.12	-0.02	-0.03
Gender (0=female, 1=male)	-0.28**	-2.03	-0.20
Education	-0.03	0.12	0.04
Group (0=NonCree, 1=Cree)	-0.19*	-2.45*	-0.24
TAS FACTOR 1	0.29**	0.13	0.17
SAT9RAT	0.07	-0.21	-0.06
CES-D	0.49***	0.19**	0.37
Constant		9.53	
R^2			0.33

Overall $F = 4.50$ ($p < 0.001$) * $P < 0.05$ ** $P < 0.01$ ***$P < 0.001$

TAS = Toronto Alexithymia Scale

SAT9RAT = Scored Archetypal Test 9, ratio of elements in explanation per elements in drawing

CES-D = Center for Epidemiologic Studies Depression Scale

r = Pearson Correlation

B = Non-standardized regression coefficient

β = Standardized regression coefficient

Table 24 - Multiple Regression Models of a Modified Version of the Somatization Subscale (SCL-90R)

		MODEL I		MODEL II		MODEL III		MODEL IV		MODEL V	
	r	B	β	B	β	B	β	B	β	B	β
Ethnicity: Group (0=NonCree, 1=Cree)	-0.19*	-2.16	-0.21	-1.77	-0.17	-1.96	-0.19	-2.78*	-0.27	-2.39*	-0.24
Sociodemographics: Age	-0.12	-0.08	-0.10	-0.08	-0.10	-0.02	-0.03	-0.05	-0.06	-0.02	-0.02
Gender (0=female, 1=male)	-0.28**	-2.77*	-0.27	-3.09**	-0.30	-1.84	-0.18	-2.89**	-0.28	-1.88	-0.18
Education	-0.03	-0.22	-0.08	-0.04	-0.02	0.13	0.05	-0.003	-0.001	0.11	0.04
EMOSUP	0.21*			0.46*	0.23	0.21	0.10				
TAS Factor 1	0.29*							0.29**	0.36	0.12	0.15
Symptomatology: CES-D	0.49***					0.22***	0.43			0.20**	0.38
Contstant		24.00		16.14		7.16		16.43		9.32	
R^2			0.13*		0.18*		0.32***		0.24**		0.33***

*P < 0.05 **P < 0.01 ***P < 0.001

EMOSUP = Emotion Suppression Scale
CES-D = Center of Epidemiologic Studies Depression Scale
TAS FACTOR 1 = Toronto Alexithymia Scale Factor 1 (Difficulty Identifying Feelings and Bodily Sensations)
r = Pearson Correlation B = Non-standardized regression coefficient β = Standardized regression coefficient

FIGURES

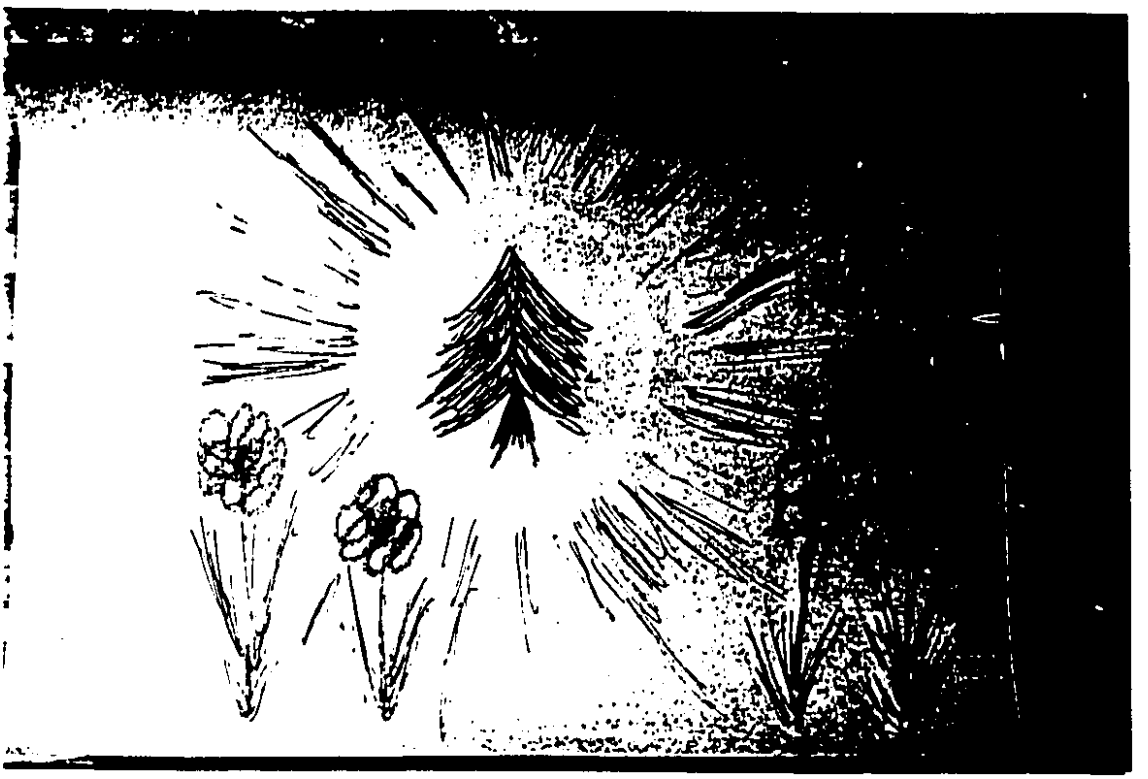

FIGURE 1

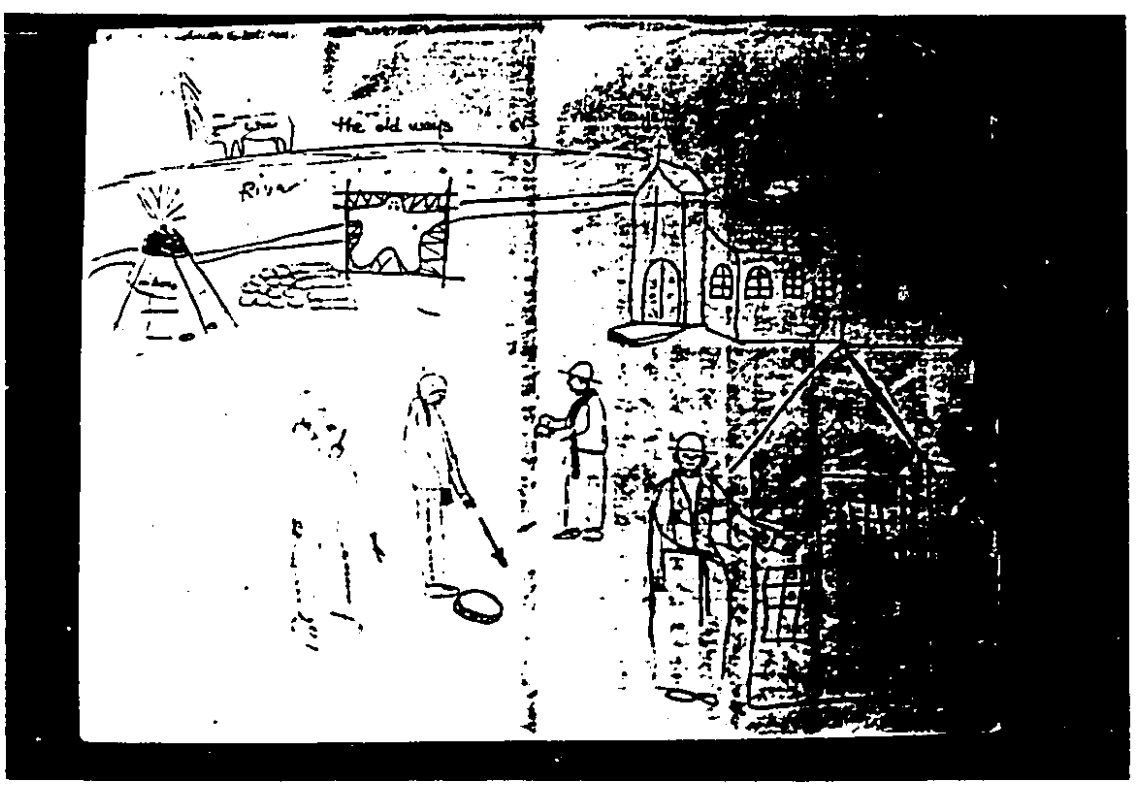

FIGURE 2

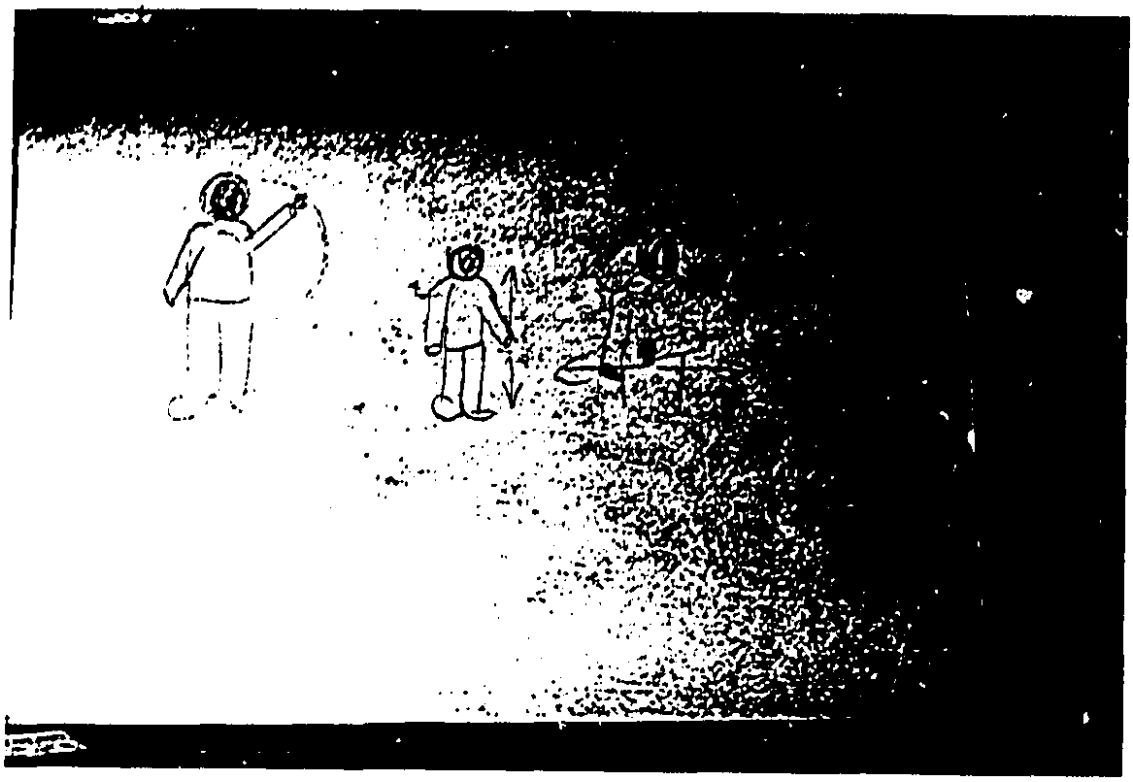

FIGURE 3

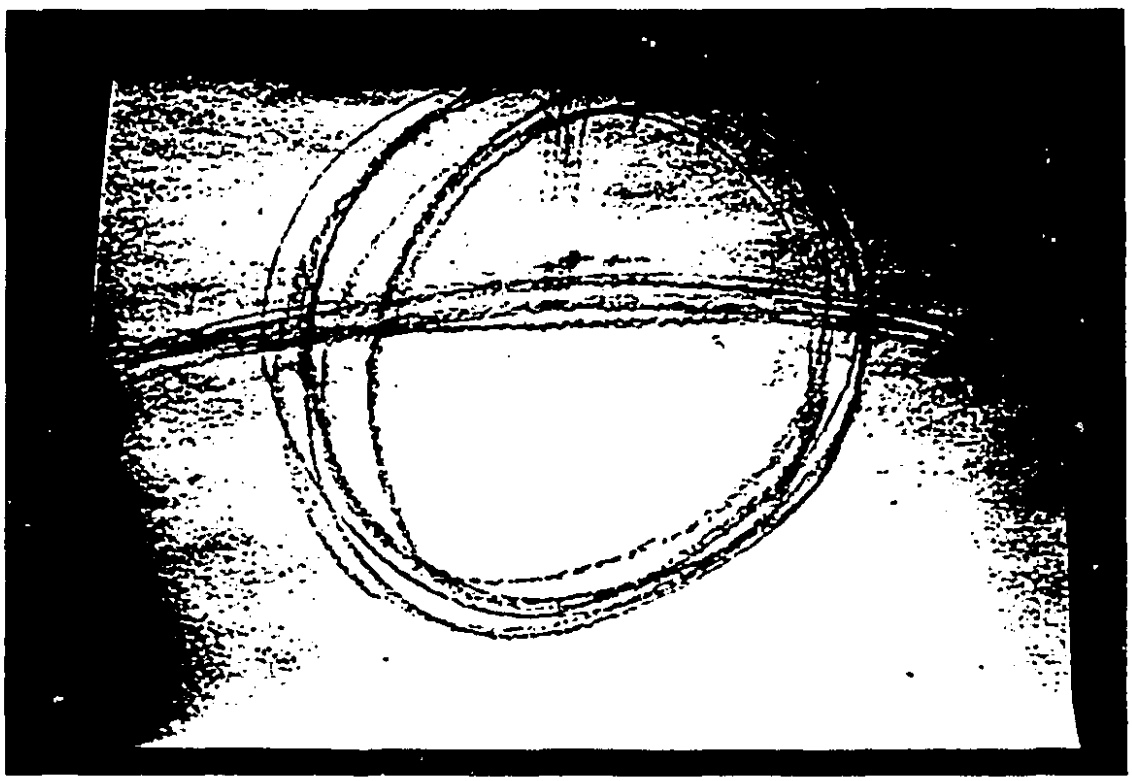

FIGURE 4

FIGURE 5