A cultural comparison of dream content, mood and waking day anxiety between Italians and Canadians

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Summary. The purpose of this study was to extend previous research on the relationship among dream content, waking day mood and waking day anxiety through the examination of these variables in two culturally different samples. . One-hundred Canadian females from Trent University, Canada ($M = 23.4$, $SD = 1.8$) and one hundred Italian females from Tor Vergata University, Rome ($M = 25.6$, $SD = 1.9$) participated in this study. All participants were asked to record one dream and to complete the BAI (Beck Anxiety Inventory) and the POMS-SF (Profile of Mood States) in order to evaluate their active mood state and the quantify their level of anxiety. Dream imagery was categorized by using the Hall and Van de Castle's method and subsequently assessed using textual analysis processing techniques. . Significant differences between Italian and Canadian females were found for dream content as well as waking day measures and the predictive value of dreams was demonstrated. The findings have clinical implications for Canadians and Italians which can now be tested with other cultures. Limitations of the study and future research directions are discussed in terms of waking day mood and dreams.

Keywords: Anxiety, dreams, mood, Italians, Canadians

1. Introduction

1.1. Dreams and Mood

Current dream research reveals that waking day mood is reflected in, and related to dreams in various ways (Cartwright, Agargun, Kirkby, & Friedman, 2006; DeCicco & Higgins, 2009; Jones & DeCicco, 2009; King & DeCicco, 2007; Schredl & Montasser, 1997). For example, mood fluctuations experienced by pregnant women are reflected in dream imagery (Mancuso et al., 2008) for example, pregnant women reporting masochistic dream content had higher levels of depression as well as shorter labor, suggesting that shifts in mood influence dream content in pregnant women (Mancuso et al., 2008). Similarly, patients with mood disorders experience certain dream imagery relating to shifts in both mood and psychological state (Beauchemin & Hays, 1995). A major change in mood is experienced in patients suffering bipolar disorder such that bizarre features in dreams correlate with mood shifts in the direction of mania, while a decrease in overall number of dreams anticipate depressive episodes. Generally, it is found that mood disturbances are reflected in dream content by several authors (Agargun &

Cartwright, 2003; Armitage, Rochler, Fitch, Trivedi, & Rush, 1995; Cartwright, Young, Mercer, & Bears, 1998; Zanasi, DeCicco, Dale, Musolino, & Wright, 2012). It has also been found that dreams have an effect on waking day mood, especially during pre-sleep (Kramer, 1993).

A dominant factor of major depressive disorder according to the DSM IV-TR includes affective or mood symptoms, such as experiencing depressed mood and feelings of guilt or worthlessness (American Psychological Association, 2000). It has been theorized that there is a constant processing of emotions which continues from the waking state to the sleeping state and further, these emotions are then reflected in dreams (Kramer, 1993). According to this theory, while in a dreaming state, there is a reduction in waking mood or negative affect which is triggered through associations and memories (Kramer, 2003). However, the function of dreams to reduce negative affect may be hindered when the negative affect is too high during pre-sleep, thus hindering the emotion regulation process while in a dreaming state. Major depressive disorder includes this abnormality in REM sleep and in dream functioning which then effects dreaming in various ways (Cartwright et al., 1998).

Depression has been associated with a reduction in dream recall as well as experiencing a dream-like quality of REM reports (Agargun and Cartwright, 2003; Armitage et al., 1995). Agargun and Cartwright (2003) explored REM sleep variables and suicidal tendencies in depressed patients. Participants who reported a more dream-like quality in REM reports from the beginning, rather than the end of the night, were associated with suicidal tendencies in depressive disorder. A reduction in dream-like quality before awakening

was also supported in the dreams of depressed patients who experienced a very low dream recall in the morning upon awakening (Armitage et al., 1995).

People with bipolar disorder experience drastic shifts in mood which is reflected in dream imagery as well (Beauchemin & Hays, 1995). Just before a manic episode, bipolar patients report experiencing dream themes consisting of death or bodily injury as well as a reduction in dream frequency just before a major depressive episode (Beauchemin & Hays, 1995). Dream imagery in bipolar patients, when experiencing shifts in mood, are described as strange and bizarre with an inconsistency in dream themes (Beauchemin & Hays, 1995). A study exploring the relationship among dreams, mood, and health found that students rating higher in depression/dejection had a higher frequency of negative emotions in dreams including sadness, anger, and aggression (King & DeCicco, 2007). Much like depression, it has been found that dreams also reflect a person's levels of anxiety (Jones & DeCicco, 2009). Interestingly, dream images of animals and increased scene changes were both found to be correlated to negative mood in a previous study (King & DeCicco, 2007).

1.2. Dreams and Anxiety

Patients suffering from excessive anxiety and worry will have relevant thoughts and feelings reflected in dreams (Gentil & Lader, 1978; Kirschner, 1999; Nielsen et al., 2006). Hobson (1999) believed that dreams reveal the associations as well as means of coping with anxiety. Anxieties in adolescence, including Generalized Anxiety Disorder, overanxious disorder, and separation anxiety, have been associated with disturbing dreams in girls and boys (Nielsen et al., 2006). Recurrent dreams can also occur with anxiety as was revealed with a woman in therapy experiencing high anxiety after childhood sexual abuse (Wilkinson, 2006). Patients with high anxiety display low percentages of friendly interactions in dreams as well as negative affect (Gentil & Lader, 1978; Kirschner, 1999). Kirschner (1999) explored the dreams of a woman with GAD and panic attacks and found that she experienced high levels of aggression along with low levels of friendliness in her dreams before drug treatment.

Duke and Davidson (2002) explored student dreams during examination periods through times of academic stress and found a higher frequency of both regular and recurrent dreams while experiencing anxiety and negative affect during the week before exams (Duke & Davidson, 2002). For female university students, dream imagery of animals was associated with feelings of anxiety (DeCicco, 2007a). Jones and DeCicco (2009) found that dream content of location changes and animal imagery were both found to be related to higher waking day anxiety. Anxiety is an important factor to be considered when examining both dream imagery and when providing dream therapy in a group setting (Wilkinson, 2006).

Group therapy involving dream work has been tested with patients with anxiety disorders including agoraphobia (Foss, 1994) and other phobias (Migliorati, 1996). The dynamics of the group aid the patient in confronting and dealing with the anxiety rather than repressing or avoiding it. High anxiety elicits strong emotions that are brought forth in dream therapy both individually and in group settings (Wilkinson, 2006). Dream imagery reflecting waking day anxiety has also been demonstrated in various cultures (DeCicco, 2007b; Hill et al., 2007; Lee, 2010; Yu, 2007).

1.3. Dreams, Anxiety, and Culture

Research supports a cross-cultural universal notion that dreams are emotion driven and reflect waking day thoughts and feelings, including anxiety (Dale & DeCicco, 2012; DeCicco, 2007a; 2007b; Lee, 2010; Yu, 2007) and this has been demonstrated across cultures. Traumatic dreams and dreams relating to PTSD were assessed in Korean American college students and dream reports were characterized as very or extremely anxious, emotionally dreadful, and without active coping by the dreamers (Lee, 2010). This was assessed through the use of the Sang Bok Lee Traumatic Dream Scales as well as the dream scales for Korean-American College Students (Lee, 2010). The dreams of a Chinese sample revealed an intense emotional component with anxiety occurring often. Dream emotions significantly correlated with emotions pre and post dreaming (Yu, 2007). Attachment anxiety and volunteer input in dream sessions with a therapist was explored with East Asians (Hill et al., 2007). East Asians scoring high on Asian values and lower on attachment anxiety had a better outcome in the high input condition in therapy (Hill et al., 2007). While further examination of dreams, both anxiety and cultural, are required, this appears to be a significant aspect worth exploring.

1.4. Comparative Dreams of Canadians and Italians

Research has begun the cross cultural comparison of dreams by comparing dreams with Italian and Canadian cultures (Zanasi, DeCicco, Dale, Musolino & Wright, 2012). Previous research has focused on both dream content and discovery with Italians using dream interpretation methods (DeCicco, Donati, & Pini, 2012; Schinco & DeCicco, 2010). Zanasi et al. (2012) explored dream emotions and sexual imagery between Italian and Canadian samples and found significant differences between the two groups in emotional content. Canadian females had more emotions, sexual imagery and sexual targets in dream imagery when compared to Italian females (Zanasi et al., 2012). Also, Italian females had more emotions and sexual dream imagery when compared to Italian males.

When examining dreams in therapy, The Storytelling Method of dream interpretation (DeCicco, 2007b) has been used in both languages (DeCicco, 2010, 2009). TSM helps the dreamer gain insight and discovery of waking day issues from dream content and this method has now been translated and tested in clinical practice with Italian samples (DeCicco et al., 2012). Schinco & DeCicco (2010) compared the dreams of Canadians and Italians utilizing the Projective Method (DeCicco, 2009) in both languages and found that both groups had discovery categories for stress, work, family, and future. There were also significant differences for the category of stress between the two groups. Issues in discovery for the Italian culture also included ethics, health, parenting, personal change, personal acceptance, and sharing. These findings suggest that the dreams of Italians and Canadians should be further explored with other content categories and this methodological protocol can then be extended to other cultures as well.

The purpose of the present study is to extend previous findings on dream content and waking measures of mood since a connection has been found in the past (Jones &

Table 1. Significant Differences in Italians and Canadians for Dream Content and Waking Day Variables.

	Italians		Canadians			
	M	*SD*	*M*	*SD*	*t*	*p*
BAI	15.94	9.92	11.46	8.29	3.47	.001
POMS	58.62	30.14	49.88	25.84	2.20	.05
Dc Animals	0.51	1.77	0.13	0.46	2.07	.05
Dc Locations	0.53	0.86	0.32	0.62	1.98	.05
Dc Emotions	1.01	0.64	1.10	0.43	ns	-

Note. BAI = score on waking day anxiety measure, POMS = score on waking day measure of mood disturbance, Dc Animals = number of animals in dream content, Dc Locations = number of location changes in dream content, Dc Emotions = number of emotions in dream content.

DeCicco, 2009). Furthermore, this research examines the cross cultural differences in dream content between Italians and Canadians in relation to mood. This extends the work which has already begun with emotions and sexual dream imagery between these two cultures (Zanasi et al., 2012).

1.5. Hypotheses

1) As with previous research on dreams and waking day anxiety and mood (Jones & DeCicco, 2009) dream content for animals, location changes, and emotions will be significantly correlated with a waking day measure of anxiety as measured by the BAI (Beck & Steer, 1993) and mood as measured by the POMS (Shacham, 1983). This will occur for both Italians and Canadians.
2) Since previous research (DeCicco, Donati, Pini, 2012; Zanasi et al., 2012) has found a difference between Canadians and Italians in dream content of emotions, it is hypothesized that there will be a significant difference between Italians and Canadians in dream content of emotions, animals, and location changes.
3) Previous research has found predictive value with dreams and waking day measures for mood and anxiety (Jones & DeCicco, 2009). Therefore, it is predicted that the number of location changes and animals in dreams will predict waking day anxiety levels as measures by the BAI and mood as measured by the POMS, for both samples.

2. Method

2.1. Participants

One-hundred female undergraduate students from Trent University in Canada (*M* = 23.4, *SD* = 1.8) and 100 female undergraduate students from Tor Vergata University in Rome (*M* = 25.6, *SD* = 1.9) participated in the study. Students were asked to volunteer in the study by providing one dream as well as filling out a measure for waking day anxiety (BAI) and for waking day mood (POMS).

2.2. Procedure and Measures

Profile of Mood States (POMS-SF). The Profile of Mood States (Shacham, 1983) measures 6 factors occurring over the past week. These factors include: Tension/Anxiety, Depression/Dejection, Fatigue/Inertia, Vigour/Activity, Confusion/Bewilderment, and Anger/Hostility. The POMS-SF con-

sists of 37 adjectives as well as descriptive phrases which are measured on a 5-point likert scale. All subscale scores of the POMS were added together and a Total Mood Disturbance (TMD) score was calculated.
The Beck Anxiety Inventory (BAI). The Beck Anxiety Inventory (Beck & Steer, 1993) measures the severity of an individual's anxiety. The BAI consists of 21 multiple-choice questions about an individual's feelings over the past week, such as any numbness or tingling, feeling of being terrified or difficulty breathing. Participants rate themselves on a 4-point likert scale on how much they were bothered by the different symptoms over the past week.
Dream Content. The categories of emotions, animals and scene changes were constructed via Hall and Van de Castle's (1966) method of content analysis guidelines and then measured with computer textual analysis. Computer textual analysis counts each occurrence of the image in the dream t The Hall and Van de Castle categories combined with a computer textual analysis program to count the occurrence of categories in order to assess the frequency of each dream content category was conducted in Italian and English respectively. This method of using computer textual analysis programs on dream data has been well established in previous research. For example, when examining the dreams of people with mood disorders (Zanasi, Pecorella, Chiaramonte, Niolu, & Siracusano, 2008), sexual content (Zanasi, DeCicco, Dale, Musolino & Wright, 2011), and dreams in relation to age (Zanasi, DePersis, Caporali, & Siracusano, 2005). Textual analysis programs treat the dream reports as a form of text and are programmed to content analyze the passages for each word in the dream.

2.3. Results

2.4. Relationship between Dream Content and Waking Day Measures

Waking day anxiety as measured by the BAI was significantly correlated with both animals, $r = .24$, $p < .05$, and location changes, $r = .22$, $p < .05$, for the Canadian sample. BAI for the Italian sample was correlated with location changes only, $r = .23$, $p < .05$. When examining waking day mood disturbance and dream content there were no significant relationships found for dream content of animals and location changes and mood disturbance as measured by the POMS-SF for either sample. These results partially confirm hypothesis 1.

2.5. Dream Content and Waking Day Measures

Significant differences in waking day variables were found between the Canadian and Italian samples (See Table 1). Italians scored higher than Canadians on both waking day measures with Italians scoring significantly higher on the BAI measuring waking day anxiety, than Canadians $t = 3.47$, $p < .05$ and on the POMS-SF for overall mood state $t = 2.20$, $p < .05$. When examining dream content, Italians were significantly higher in dream content of animals, $t = 2.07$, $p < .05$, as well as location changes, $t = 1.98$, $p < .05$, than Canadians.

These findings confirm hypothesis 2. There was no significant difference between Italians and Canadians for overall dream emotion.

2.6. Regression Analysis

Hypothesis 3 was supported for the Canadian sample. The number of location changes ($\beta = .248$), and animals ($\beta = .226$) in dream content predicted waking day anxiety, $R = .33$, $p < .01$. These findings suggest that imagery with increased animals and increased changes in sceneries can predict the severity of an individual's waking day anxiety as measured by the BAI.

3. Discussion

3.1. Dream Content in Relation to Waking Day Variables

This study supports and extends previous research (Jones & DeCicco, 2009) on the relationship between dream content and waking day mood. Location change is important when examining dream content, as it is significantly related to the score on a waking day anxiety measure (BAI) (Jones & DeCicco, 2009). This has been demonstrated with two different cultures in the present study: Italians and Canadians. Animal imagery was correlated with waking day anxiety for the Canadian sample only.

Mood disturbance was not related to dream content categories for either sample which does not support the continuity hypothesis. However, future research should utilize a different measure of mood disturbance rather than the POMS to see if this result is replicated. These findings suggest that dreams reveal more information on waking day anxiety rather than overall waking day mood disturbance, for both Italians and Canadians. This research should be extended to include other cultures and other psychiatric samples, with particular emphasis on the continuity hypothesis of dreaming.

3.2. Cultural Differences in Dream Content and Waking Day Variables

With respect to dream content categories, this study supports previous research that found Italians and Canadians to have a high frequency of content with animals, location changes, and emotions (DeCicco, 2007; DeCicco & Schinco, 2010; Zanasi et al., 2012). Italians were significantly higher in the dream content of animals and location changes when compared to Canadians; with no significant difference in overall emotion between the two groups. This suggests a cultural difference in scene changes and animals in dream reports but not with respect to a measure of overall emotions. Interestingly, Zanasi and colleagues (2012) found emotions to differ between Italian men and Canadian men, and, between Italian females and Canadian females when compared by gender. Future research should involve comparisons by gender and include other emotion categories when analyzing the dream reports for emotions. For example, the degree of emotional tone in a dream report should be included (Amini, Sabourin, & De Koninck, 2011).

When examining waking day variables, this study supports previous findings (Schinco & DeCicco, 2010; Zanasi et al., 2012) that Italians are higher in anxiety and overall mood when compared to Canadians. Italians scored significantly higher on waking measures of anxiety and mood disturbance than Canadians. This finding may be due to a sampling issue or the fact that there may be a cultural difference between Italians and Canadians in emotional expression as was noted by DeCicco, Donati and Pini (2012) when examining dream content of Canadian and Italian therapy patients. Extending this research with various waking day measures is certainly warranted.

3.3. Cultural Comparison of the Predictive Value of Dreams

Regression analyses revealed that waking day anxiety was predicted from the number of location changes as well as animal imagery for the Canadians only. Interestingly, total emotions in dream content did not predict anxiety for either group. Future research in this area is certainly warranted and should include other dream content categories when predicting waking day anxiety for Italians with culturally relevant categories such as family, art and architecture (DeCicco, Donati & Pini, 2012).

The overall findings of the present study have clear clinical value for Italians and Canadians as well as implications for other cultures. Future research should involve the use of clinical as well as non-clinical populations and the study should be extended to different cultures while including culturally relevant dream content categories for each culture.

References

Agargun, M. Y., & Cartwright, R. (2003). REM sleep, dream variables and suicidality in depressed patients. Psychiatry Research, 119, 33-39.

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed., text rev.). Washington, DC American Psychiatric Association.

Amini, R., Sabourin, C., & De Koninck, J. (in press). Word associations contribute to machine learning in automatic scoring of degree of emotional tones in dream reports. Consciousness and Cognition.

Armitage, R., Rochler, A., Fitch, T., Trivedi, M., & Rush, J. (1995). Dream recall and major depression. Dreaming, 5, 189-198.

Beauchemin, K. M., & Hays, P. (1995). Prevailing mood, mood changes, and dreams in bipolar disorder. Journal of Affective Disordes, 35, 41-49.

Beck, A. T. & Steer, R. A. (1993). Beck Anxiety Inventory manual. San Antonio, TX: Psychological Corporation.

Cartwright, R., Agargun, M. Y., Kirkby, J., & Friedman, J.K. (2006). Relation of dream to waking concerns. Psychiatry Research, 141, 261-270.

Cartwright, R., Young, M. A., Mercer, P., & Bears, M. (1998). Role of REM sleep and dream variables in the prediction of remission from depression. Psychiatry Research, 80, 249-255.

Dale, A. L., & DeCicco, T. L. (2012). Content and discovery in the dreams of Canadians male university students: A pilot study. Dreaming. 101-115.

DeCicco, T. L. (2007a). Dreams of female university students: Content Analysis and the relationship to discovery via the Ullman method. Dreaming, 17(2), 98-112.

DeCicco, T.L. (2007b). What is the storytelling? Examining discovery with The Storytelling Method (TSM) and testing with a control group.Dreaming, 17, 227-238.

DeCicco, T.L., Donati, D., & Pini, M. (2012). The Storytelling Method in Italian and English with Therapy Patients: Content Analysis and Discovery. International Journal of Dream Research, 5, 68-75.

DeCicco, T. L., & Higgins, H. (2009). The dreams of recovering alcoholics: Mood, dream content, discovery, and The Storytelling Method of dream interpretation. International Journal of Dream Research, 2(2), 45-51.

Duke, T., & Davidson, J. (2002). Ordinary and recurrent dream recall of active, past and non-recurrent dreamers durign and after academic stress. Dreaming, 12(4), 185-197.

Foss, T. (1994). from phobic inhibitions to dreams. Group Analysis, 27, 305-317.

Gentil, M., & Lader, M. (1978). Dream content and daytime attidudes in anxious and calm women. Psychological Medicine, 8, 297-304.

Hall, C. S., & Van de Castle, R. L. (1966). The content analysis of dreams. New York: Appleton Century-Crofts.

Hill, C. E., Tien, Sheu, Sim, W., Ma, Y., Choi, & Tashiro, T. (2007). Predictors of outcome of dream work for East Asian volunteer clients: Dream factors, attachment anxiety, Asian values, and therapist input. Dreaming, 17(4), 208-226.

Hobson, J. A. (1999). The new neuropsychology of sleep: Implications for psychoanalysis. Neuropsychoanalysis, 1(2), 157-183.

Jones, E. & DeCicco, T.L. (2009). Differentiating anxiety and depression using The Storytelling Method of Dream Interpretation and Content Analysis. Paper presentation at the 26th Annual Conference of the International Association for The Study of Dreams, Chicago, Ill.

King, D. B., & DeCicco, T. L. (2007). The relationships between dream content and physical health, mood, and self-construal. Dreaming, 17, 127-139.

Kirschner, N. T. (1999). Medication and dreams: Changes in dream content after drug treatment. Dreaming, 9, 195-200.

Kramer, M. (1993). The selective mood regulatory function in dreaming. In: Moffitt, A., Kramer, M., Hoffman, R. _Eds.., The Functions of Dreaming. Suny Press, New York, pp. 139-195.

Lee, S.B. (2010). Dreaming brain and acculturative mind. European Psychiatry, 25, (Supplement 1), 543-543.

Mancuso, A., DeVivo, A., Fanara, G., Settineri, S., Giacobbe, A., & Pizzo, A. (2008). Emotional state and dreams in pregnant women. Psychiatry Research, 160, 380-386.

Miglioratti, P. (1996). Group therapy and phobic obsessional neurosis (S. D. Weston, Trans.). Group Analysis, 29, 449-461.

Nielsen, T. A., Laberge, L., Paquet, J., Tremblay, R. E., Vitaro, F., & Montplaisir, J. (2006). Development of disturbing dreams during adolescence and their relation to anxiety symptoms. Sleep, 23(6), 1-10.

Schinco, M & DeCicco, T.L. (2010). Comparing The Projective Method of Dream Interpretation between Italians and Canadians. International Journal of Dream Research, S1-S12.

Schredl, M., & Montasser, A. (1997). Dream recall: State or trait variable? Part II: State factors, investigations and final conclusions. Imagination, Cognition and Personality, 16, 239-261.

Shacham, S. (1983). A shortened version of the Profile of Mood States. Journal of Personality Assessment, 47, 305-306.

Wilkinson, M. (2006). The dreaming mind brain: A Jungian perspective. Journal of Analytical Psychology, 51, 43-59.

Yu, C. (2007). Emotions before, during, and after dreaming sleep. Dreaming, 17, 73-86.

Zanasi, M., DeCicco, T. L., Dale, A. L., Musilino, G., & Wright, C. (2012). Exploring dreams with sexual imagery across cultures and between genders: Content Analysis with the dreams of Italians and Canadians. Imagination, Cognition, and Personality, 32, 2, 151-164..

Zanasi, M., DePersis, S., Caporali, M., & Siracusaro, A. (2005). Dreams and age.Perceptual Motor Skills, 100, 925-938.

Zanasi, M., Pecorella, M., Chiaramonte, C., Niolu, C., & Siracusano, A. (2008). Dreams by people with mood disorders. Psychological Reports, 103, 381-394.