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SELF-REPORTED MOOD ACCOMPANIED DEPRESSIVE SYMPTOMS IN NONPATIENTS: A FOCUS ON AN ABILITY TO IDENTIFY AFFECTIVE STATES

By

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We investigated characteristics of self-reported mood that accompanied depressive symptoms in 119 nonpatients of adolescent. In addition, it was also examined whether relationships between the mood and the symptoms would vary with an ability to identify affective states. On the basis of scores of the 1st factor in the Toront Alexithymia Scale, the subjects were assigned to either a high ability group or a low ability group. A factor analysis confirmed that self-reported mood converged to two factors labeled as tense arousal and energetic arousal. Low level of the energetic arousal besides the high tense arousal level was found to correlate to the depressive symptoms reflected by the total scores of the Self-Rating Depression Scale. In addition, energetic arousal level also correlated to the cognitive aspects of the symptoms such as indecisiveness or personal devaluation in the high ability group. Thus, we pointed out an importance to monitor energetic arousal level to grasp the depressive symptoms. However, the low ability group did not exhibit such a close relationship between energetic arousal and the symptoms. This implied that an awareness of the mood and/or the symptoms was inaccurate in this group.

Key words: self-reported mood, depressive symptoms, energetic arousal, tense arousal, alexithymia.

INTRODUCTION

The term mood was typically defined, in comparison with emotions, as less differentiated affective state with longer duration (Davidson & Ekman, 1994). Human can be aware of their own mood corresponding to a variety of affective states. The present study investigated self-reported mood that accompanied depressive symptoms, and particularly focused on individual differences of the mood.

Recently, an awareness of one's own mood was suggested to serve as useful information to regulate one's affective states (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Schwarz, 1990). For example, the subjects in bad mood recalled negative memories in the first time. However, they tended to recall positive memories in the next retrieval to repair their mood, which in turn disappeared the mood-congruency effect of memories (Josephson, Singer, & Salovey, 1996). Among a variety of affective states, depression was found to bias or impair remarkably cognitive functions (Mineka & Sutton, 1992). So, it may be necessary to grasp characteristics

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of subjective mood accompanies with depressive symptoms in order to self-regulate mood and cognition.

Subjective components of mood have been measured using mood related adjectives with Likert-scales. Factor analyses showed that self-reported mood was constituted by two factors. These factors were labeled tense arousal and energetic arousal, respectively, and found to be independent of each other (Thayer, 1989; Watson & Tellegen, 1985)². High level of the tense arousal is defined as unpleasant - aroused state such as annoyed or afraid. On the other hand, high level of the energetic arousal is defined as pleasant - aroused state such as active or peppy.

Although the structures of the self-reported mood were investigated in detail, it is not fully understood that how these moods correlate to cognitive aspects of the depressive symptoms. Clark and Watson (1991) suggested that lack of positive mood (e.g., the energetic arousal) is the distinctive feature of depression, while intense negative mood is common to anxiety and depression. However, relatively less attention has been given to the energetic arousal's dimension, since the negative mood describing directly the depressive one (e.g., sad or blue) was mainly focused on (for a review, see Clark & Watson, 1991). So, the present study intends to elucidate relationships between the depressive symptom and the multidimensional mood, that is, the energetic arousal, the tense arousal, and the depressive mood.

One further problem in investigating the self-reported mood is a large difference among individuals in abilities to attend and label one's own affective states (Salovey, et al., 1995; Swinkels & Giuliano, 1995). We must draw attention to these individual differences because the abilities are suggested to be needed in identifying and regulating one's own mood (Salovey et al., 1995). To measure these individual differences, the present study focused on alexithymia. Alexithymia is a set of emotional traits. One of these traits is the difficulty in identifying feelings and in distinguishing between feelings and body sensations (Taylor, 1984). Preceding findings indicated that alexithymia is highly susceptible to somatic illness (Lumley, Stettner, & Wehmer, 1996). So, it seems reasonable to suppose that this trait may contribute to dysregulation of affective states.

The Toront Alexithymia Scale (TAS) can be used to make measurement of this trait. Fortunately, its reliability and validity have been confirmed in the Japanese version (Miyaoaka, 1996). Then, we assumed that the reported mood would be dissociated from reported depressive symptoms in the individuals with high scores of this scale because they would have some difficulty in identifying their mood.

METHOD

Subjects: Subjects were 93 female and 26 male undergraduates of a collage in the City of Sendai. Their age ranged from 18 to 19, and the average was 18.9. Subjects answered

2. Watson and Tellegen (1985) labeled almost the same factors as negative affect and positive affect, respectively.

questionnaires in a group of 30-40 people.

Questionnaire:

(1) *Self-reported mood.* Nineteen adjectives in the General Arousal Checklist (GACL; Matsuoka & Hatayama, 1989)³ and 13 adjectives taken from the preceding studies were used (Russell, 1983; Watson & Tellegen, 1985)⁴. Additionally, to measure depressed mood directly, we used the 5 adjectives in the depression-dejection subscale of the Profile of Mood States (POMS) -Short Form (Yokoyama, & Araki, 1994)⁵. The 1 adjective (sad) belonged to both the POMS and the 13 adjectives. So, the total number of the adjectives was 36 in this study. All adjectives were described in Japanese. For each adjective mentioned above, the subjects were asked to rate the frequency at which they felt the mood during the past week using 5-point scales (1 = not at all, 2 = seldom, 3 = moderately, 4 = frequently, 5 = very frequently).

(2) *Depressive symptoms.* The Japanese version of the Self-Rating Depression Scale (SDS) was used (Fukuda & Kobayashi, 1973). This scale had 20 items with 4-point scales. Since we had a particular interest in cognitive aspects of depressive symptoms, 3 specific symptoms in the SDS, besides the SDS total scores, were subjected to analyses. These 3 symptoms were as followed; Psychomotor retardation ("I find it easy to do the things I used to"), indecisiveness ("I find it easy to make decisions"), and personal devaluation ("I feel that I am useful and needed"). Obtained scores were reversed. So the higher score of each item indicated the more severity of the symptom.

(3) *Ability to identify affective states.* The Japanese version of the Toront Alexithymia Scale (TAS) was used (Miyaoka, 1996). This scale was constituted by 4 factors. The present study analyzed only the 1st factor that was labeled as ability to identify and distinguish between feelings and bodily sensations (e.g., "I am often confused about what emotion I am feeling") since the other 3 factors (ability to express emotion, daydreaming, and externally thinking) were not our present concerns. This 1st factor contained 11 items with 5-point scales.

RESULTS AND DISCUSSION

Factor structures of reported mood

The Cronbach's coefficient α was computed from the 5 items in the POMS depression-dejection subscale. The coefficient α was .77, which confirmed the high internal consistency of this scale. So, total scores of these 5 items were calculated. We will use POMS-depression score to refer this value.

A factor analysis using the principal component method with the varimax rotation was conducted for the POMS-depression scores and the 32 adjectives mentioned above. The present

3. The items in the GACL were as followed; annoyed, jittery, tense, nervous, strained, still, peaceful, rested, at ease, cozy, active, energetic, vigorous, willingly, briskly, drowsy, sluggish, absently, sleepy, dull. The item "sleepy" was not included to the present study because this rating was supposed to be biased by the everyday sleep.

4. The 13 items were as followed; peppy, bored, anxiety, calm, relaxed, aroused, excited, quiet, lively, happy, satisfied, disappointed, sad.

5. The items in the POMS were as followed; sad, discouraged, unworthy, lonely, gloomy.

study predetermined to extract two factors according to the two-factor model of mood (Thayer, 1989; Watson & Tellegen, 1985). The first factor and the second factor accounted for 19.7% and 12.4% of the overall variance, respectively. The first factor was labeled "tense arousal" because this factor was loaded on positively by "anxiety" as well as the POMS-depression score and did negatively by "relaxed". The second factor was labeled "energetic arousal" because this factor was loaded on positively by "peppy" and did negatively by "bored". The POMS-depression score loaded at .830 on the tense arousal and at -.147 on the energetic arousal. This result confirmed that depressed mood associated with both high level of the tense arousal and slightly low level of the energetic arousal.

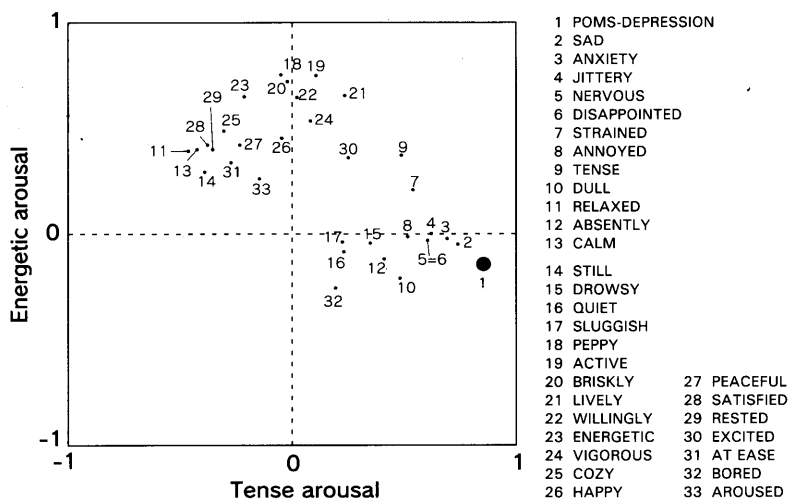


Fig. 1. Factor structures of the reported mood. Each point represents the factor loading to the tense arousal (horizontal axis) and the energetic arousal (vertical axis).

Relationships between the mood and the depressive symptoms

Total scores of the 11 items in the TAS-1st factor were calculated. The higher score indicated the lower ability to identify feelings. On the basis of the median in this score, each subject was assigned to either a low score group or a high score group.

A series of regression analyses was conducted treating the POMS-depression score as an independent variable and the four symptom-variables (SDS total score, psychomotor retardation, indecisiveness, and personal devaluation) as dependent variables with setting the two groups apart. The results of these analyses were that the depressed mood correlated to the SDS total score in both groups (Table 1). This result is reconfirmation of the preceding studies (Clark & Watson, 1991). However, the POMS-depression score was not able to predict sufficiently the

cognitive aspects of the symptoms. To put it more concretely, the depressed mood did not correlate to the specific symptoms except the psychomotor retardation in the highscore group. This may be because the POMS-depression scale measured almost the same content as the tense arousal and did not reflect the lack of energy (see Fig. 1).

Table 1. Regression analyses of the depressed mood onto the depressive symptoms : Regression coefficient.

	GROUP	
	LOW	HIGH
TOTAL	.44**	.40**
PSYCHOMOTOR	.18	.35**
INDECISIVENESS	.09	.03
DEVALUATION	.08	.08

Notes. LOW = Low score group; HIGH = High score group.
TOTAL = SDS total score ; PSYCHOMOTOR = Psychomotor retardation ; DEVALUATION = Personal devaluation.

** $p < .01$; * $p < .05$

Next, a series of multiple regression analyses was conducted treating both the tense arousal factor scores and the energetic arousal factor scores as independent variables and the four symptom-variables mentioned above as dependent variables with setting the two groups apart. As expected, dissimilar results were obtained between the two groups. Both high tense arousal level and low energetic arousal level correlated to the SDS total scores in the two groups. However, the contribution of the energetic arousal was relatively weak in the high score group. More clear results were obtained in the specific symptoms (Table 2). In the low score group, the energetic arousal level correlated to the decisiveness, personal devaluation, and the

Table 2. Multiple regression analyses of the tense arousal and the energetic arousal onto the depressive symptoms ; Coefficient β and R^2 .

	GROUP					
	LOW			HIGH		
	TA	EA	R^2	TA	EA	R^2
TOTAL	.40**	-.42**	.32	.59**	-.27*	.35
PSYCHOMOTOR	.08	-.27*	.08	.37**	-.16	.15
INDECISIVENESS	.15	-.37**	.16	.14	-.17	.04
DEVALUATION	.00	-.43**	.18	.12	-.24	.07

Notes. LOW = Low score group ; HIGH = High score group; TA = Tense arousal ; EA = Energetic arousal ; TOTAL = SDS total score ; PSYCHOMOTOR = Psychomotor retardation ; DEVALUATION = Personal devaluation.

** $p < .01$; * $p < .05$

psychomotor retardation. On the other hand, in the high score group, only psychomotor retardation correlated to the tense arousal.

We can say from these results that the lack of energy predicted cognitive impairments such as the indecisiveness or personal devaluation, which was a typical symptom of depression (Diagnostic and statistical manual of mental disorders, 4th ed.: American psychiatric Association, 1994). On the other hand, to the SDS total scores, high level of the tense arousal besides low level of the energetic arousal associated. This may be because the SDS included the symptoms typically found in anxiety, such as fatigue and restlessness.

In the high score group, however, the energetic arousal level did not correlate to the specific symptoms. Using t-test, the high score group was proved to show lower factor scores of the energetic arousal than those of the low score group ($t = 2.013$, $df = 117$, $p < .046$). So, it would be untrue to say that high score group is insensitive to the lack of the energetic arousal. Then, we can build up one hypothesis that individuals in the high score group may not be able to identify accurately their own mood and/or symptoms. This hypothesis was supported by the finding that alexithymia was associated with being decoupled in one's physiological and subjective indices of arousal (Newton & Contrada, 1994).

The present results have some implications for mood regulation. Thayer, Newman, and McClain (1994) found that strategies for repairing bad mood were divided roughly into either energy enhancement or tension-reduction, and that the most efficient way was mixture of the two. Their theory agrees with the present results that both the energetic arousal and the tense arousal associated with depression. Besides their theory, the present results suggested the critical role of the energetic arousal level to control some cognitive aspects of the depressive symptoms. However, the high score group did not show the relationship between the energetic arousal level and the symptoms. So, it may be worthy to examine whether mood regulating strategies usually used were somewhat different between the two groups.

At last, we must point insufficiency in the present study. The class of the subjects was limited to the nonpatients in adolescence. It is necessary to increase the number of subjects and to compare different classes of subjects to generalize the present results.

CONCLUSION

We found that both low level of the energetic arousal and high level of the tense arousal correlated to the depressive symptoms. Particularly, lack of the energetic arousal was proved to be a critical factor for predicting the cognitive aspects of the symptoms. Then, we stressed the importance to monitor energetic arousal level to grasp one's affective states. However, the individuals with the high alexithymia scores did not exhibit such a relationship between the energetic arousal and the symptoms. This led to the suggestion that an awareness of mood and/or symptoms may be inaccurate in these individuals.

REFERENCES

- American Psychiatric Association. **1994** *Diagnostic and statistical manual of mental disorders*. (4th ed.) Washington, DC: Author.
- Clark, L., & Watson, D. **1991** Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, **3**, 316-336.
- American Psychiatric Association. **1994** *Diagnostic and statistical manual of mental disorders*. (4th ed.) Washington, DC: Author.
- Clark, L., & Watson, D. **1991** Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, **3**, 316-336.
- Davidson, R., & Ekman, P. **1994** How are emotions distinguished from moods, temperament, and other related affective constructs? In P. Ekman & R. Davidson (Eds.), *The nature of emotion: Fundamental questions*. New York: Oxford Press, pp. 137-149.
- Fukuda, K., & Kobayashi, S. **1973** A study on a self-rating depression scale. *Psychiatria et Neurologia Japonica*, **75**, 673-679. (in Japanese)
- Josephson, B., Singer, J., & Salovey, P. **1996** Mood regulation and memory: Repairing sad moods with happy memories. *Cognition & Emotion*, **10**, 437-444.
- Lumley, M., Stettner, L., & Wehmer, F. **1996** How are alexithymia and physical illness linked?: A review and critique of pathways. *Journal of Psychosomatic Research*, **41**, 505-518.
- Miyaoka, H. **1996** Alexithymia and related constructs. *The Journal of Adult Diseases*, **26**, 192-196. (in Japanese)
- Matsuoka, K., & Hatayama, T. **1989** *GACL self report of daily activity: Morningness/Eveningness comparison*. Paper presented at the 53th meeting of the Japanese psychological association. (in Japanese)
- Mineka, S., & Sutton, S. **1992** Cognitive biases and the emotional disorders. *Psychological Science*, **3**, 65-69.
- Newton, T., & Contrada, R. **1994** Alexithymia and repression: contrasting emotion-focused coping styles. *Psychosomatic Medicine*, **56**, 457-462.
- Russell, J. **1983** Pancultural aspects of the human conceptual organization of emotions. *Journal of Personality and Social Psychology*, **45**, 1281-1288.
- Salovey, P., Mayer, J., Goldman, S., Turvey, C., & Palfai, T. **1995** Emotional attention, clarity, and repair: Exploring emotional intelligence using the trait meta-mood scale. In J. Pennebaker (Ed.), *Emotion, disclosure, & health*. Washington, DC: American Psychological Association, pp. 125-154.
- Schwartz, N. **1990** Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior*, Vol. 2. New York: Guilford Press, pp. 527-561.
- Swinkels, A., & Giuliano, T. **1995** The measurement and conceptualization of mood awareness: Attention directed toward one's mood states. *Personality and Social Psychological Bulletin*, **21**, 934-949.
- Taylor, G. **1984** Alexithymia: Concept, measurement, and implications for treatment. *The American Journal of Psychiatry*, **141**, 725-732.
- Thayer, R. E. **1989** *The biopsychology of mood and arousal*. New York: Oxford University Press.
- Thayer, R. E., Newman, R., & McClain, T. **1994** Self-Regulation of Mood: Strategies for changing a bad mood, raising energy, and reducing tension. *Journal of Personality and Social Psychology*, **67**, 910-925.
- Watson, D., & Tellegen A. **1985** Toward a consensual structure of mood. *Psychological Bulletin*, **98**, 219-235.
- Yokoyama, K., & Araki, S. **1994** Manual for the Japanese version of the Profile of Mood States (POMS). Tokyo: Kaneko Shyoubou. (in Japanese)

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