

Cognitive and behavioral features of Modern type depression in Japan

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Introduction

In this study we examined the validity and reliability of a newly developed scale, **the Interpersonal Sensitivity/Privileged Self Scale (IPS)**. Interpersonal sensitivity/Privileged self refers to a cognitive behavioral style that leads to **“Modern type depression (MTD)”** which has different features from those of traditional type depression (i.e., melancholic depression), and has been observed in Japan especially after 1990 (Tarumi, & Kanba, 2005).

Recently, psychiatrists (e.g., Tarumi, 2005) in Japan have reported a type of depression (i.e., Modern type depression) with features that differ from those of traditional type depression (i.e., melancholic depression) (see Table 1). MTD is not an established mental disorder, but a generic term indicating a sort of depression syndrome¹ (Japanese Society of Mood Disorders, 2012). Because Melancholic depression has been regarded as a textbook example of depression in Japan, MTD is confounding Japanese clinicians about the concept of depression.

Since there is no psychological theory elucidating the developmental mechanism of MTD, we began the research by collecting descriptions of the cognitive and behavioral characteristics of people with MTD in order to construct a psychological theory of MTD. A series of the procedures was followed. At first, we found 14 Japanese books about MTD that were written by psychiatrists, which were intended for general readership. We extracted 105 items relating to cognitive and behavioral characteristics of MTD from those books. These 105 items were analyzed using the KJ method (Kawakita, 1967)² which resulted in the integration of 105 items into 64. The next step involved the use of expert judgment, so as to further reduce the number of the items. After adding four items relating to melancholic type of depression, a total of 68 items were presented to five psychiatrists with more than eight years' experience in the field, or clinical psychologists with more than 10 years' experience in the field, whom we asked to assess whether each description was observed only among people with MTD and not those with other types of depression, including the melancholic type. As a result, it appeared that the cognitive-behavioral features of people

¹ MTD is considered inclusive of several subtypes of depression, which were mostly proposed by Japanese psychiatrists: “Taikyaku shinkei-sho: withdrawal neurosis” (Kasahara, & Kimura, 1975), “Tohi-gata utsu-byo: avoidant type of depression” (Hirose, 1977), “Gendaigata utsu-byo: modern type of depression” (Matsunami, & Yamashita, 1991) and “Mizyuku-gata utsu-byo: immature type of depression” (Abe et al., 1995), “Dysthymia-gata utsu-byo: dysthymic type of depression” (Tarumi, 2005; Tarumi, & Kanba, 2005). Referring to the criteria in the Diagnostic and Statistical Manual of Mental Disorders (IV-TR; American Psychiatric Association, 2000), the features of depression with atypical features overlap with those of MTD (Abe, 2011; Natsume, 2012)

² The KJ method was developed for creative thinking and involves the use of cards to create a conceptual map during brainstorming. In Japan, the KJ method has been sometimes used for qualitative studies in academic as well as practical settings.

with MTD could be integrated into the following, as shown in Table 2: interpersonal sensitivity, privileged self, and insisting on depression. On the basis of this result, we proposed a new psychological concept that elucidates MTD, namely, Interpersonal sensitivity/Privileged self.

What is Interpersonal Sensitivity/Privileged Self?

Interpersonal sensitivity/Privileged self (Sakamoto, Muranaka, & Yamakawa, in press) is a concept elucidating MTD. **Interpersonal sensitivity** is defined as a tendency to be worried about/react excessively to negative evaluation by others. **Privileged self** is defined as a tendency to pursue one's pleasure prior to harmony with others. Interpersonal sensitivity/Privileged self is thought to be a vulnerability factor for MTD. "Interpersonal sensitivity/Privileged self" is the concept which combines interpersonal sensitivity and privileged self. It is assumed that people with high Interpersonal sensitivity/Privileged self tend to become depressed when experiencing negative evaluation by others who have significant influence on them (i.e., their superiors). However, unlike individuals with melancholic depression, these individuals are likely to blame the person who evaluated them negatively, instead of blaming themselves.

In order to examine our hypothetical model empirically, we developed **the Interpersonal Sensitivity/Privileged Self Scale (IPS)**. The outline is described in a structured manner below. Details will be reported at a later date.

What is the Interpersonal Sensitivity/Privileged Self Scale (IPS)?

After compiling the cognitive/behavioral features of people with MTD, as mentioned in the Introduction, 54 items were included in the final set comprising the cognitive-behavioral characteristics of MTD in the newly constructed scale. Subsequently, we administered the scale to 756 Japanese undergraduates, and extracted six factors which were summarized into two superordinate factors through factor analysis with promax rotation. The first superordinate factor was Interpersonal Sensitivity (IS; 16 items), which represents intense reactions to negative evaluation by others. IS comprises three subordinate factors: evaluation apprehension, over-reaction to negative feedback, and avoidance. The other second superordinate factor was Privileged Self (PS; 9 items), which measures the degree to which people think that they should be regarded highly. PS also comprises three subordinate factors: sense of victimization, disobedience, and results dependence. Each item is rated on a 5-point scale ranging from 1 (*Very unlike me*) to 5 (*Very like me*). Table 3 shows examples of items of the IPS.

Purpose

In this text, we report on the results obtained during the initial study, which evaluated the validity and reliability of the IPS. Based on the previous discussion, it was hypothesized that the IPS score positively correlated with depressive symptoms. We also speculated that IPS scores manifest differently in MTD and melancholic depression. In particular, the IPS scores of people with MTD would be higher than those of people with melancholic depression.

Method

Participants and Procedure

Questionnaires were administered to participants during a lecture slot. The participants were 225 (102 male, 113 female) Japanese undergraduates enrolled in an introductory psychology course at three large private universities in the Tokyo area, aged 18–25 years ($M = 19.61$, $SD = 1.19$). The students were briefly oriented to the broad aims of the study and then asked to complete the questionnaire on their own. All the questionnaires were filled in anonymously.

The Interpersonal Sensitivity/Privileged Self Scale

An Interpersonal Sensitivity/Privileged Self Scale (IPS) was developed to measure the cognitive and behavioral style of individuals with MTD (for details, refer to a section above, titled, “What is IPS”).

Other Types of Measurement

In order to examine the convergent and divergent validity of the IPS, we administered the Global Scale for Depression (GSD). The GSD (Fukunishi, & Fukunishi, 2012) is a 30-item scale divided into two parts, that is, the assessment of depressive symptoms and distinction between depression subtypes (i.e., melancholic, atypical, and unidentified). The first part of this scale (GSD-1; 17 items) measures the level of depressive symptoms; the degree of the distress associated with each item is rated on a 3-point scale ranging from 1 (*not at all*) to 3 (*frequently*). The second part (GSD-2; 13 items) measures the type of depression affecting an individual. Each item is rated on a 3-point scale ranging from -1 to 1 (range; -13–13). A score of -3 or less denotes the atypical type of depression, whereas a score of 3 or more denotes melancholic depression; the score between -3 and 3 were categorized into an unidentified group. Since previous studies (Abe, 2011; Natsume, 2012) have stated that atypical depression presumably related to MTD, the GSD adequately serves our purpose that comparing the score of the IPS in MTD with melancholic depression. Fukunishi, and Fukunishi (2012) verified the validity and reliability of the GSD; in our survey, the GSD-1 yielded $\alpha = .87$.

Statistical Analyses

R for Windows version 2.15.0 and anovakun version 4.3.3, an ANOVA function that runs on R software, were used for all statistical analyses. The significance level was set at $\alpha = .05$ for the analysis of variance (ANOVA), and post-hoc comparisons were conducted using a Holm’s sequentially rejective Bonferroni procedure.

Results

Reliability

The IPS yielded $\alpha = .90$; the IS part of the scale yielded $\alpha = .92$ and the PS part yielded $\alpha = .71$.

Validity

The criterion-related validity of the IPS was estimated through Pearson’s correlation coefficients. There was

a positive correlation between the IPS and the GSD-1 ($r = .40$, 95%CI [.28, .51], $p < .001$). Examining the correlation of the two subscales of the IPS with the GSD-1, we obtained similar results; IS and PS positively correlated with the GSD-1 (IS: $r = .34$ [.22, .46], $p < .001$; PS: $r = .35$ [.23, .46], $p < .001$).

For the ANOVA, participants were classified into three types of depression, based on their total scores on the GSD-2. The mean score on the GSD-2 was 0.53; the standard deviation was 2.67 and the scores ranged from -10 to 8. Of these participants, 28 (12 male, 16 female) were classified as having the features of atypical depression, 44 (16 male, 28 female) as melancholic, and 143 (74 male, 69 female) were classified into neither category. There was no sex ratio differences in those subtypes ($\chi^2(2) = 3.47$, $p = .177$).

One-way ANOVAs were conducted on the total scores obtained on the IPS, as well as the scale's two superordinate factors (IS, PS). The results of the ANOVA on the total means obtained for the IPS showed significant differences between the depression types ($F(2,212) = 3.49$, $p = .032$, $\eta_p^2 = 0.03$, 95%CI [0, 0.09]). Post-hoc comparisons revealed that the atypical type group obtained a significantly higher IPS score ($M = 83.68$, 95%CI [79.13, 88.22], $SD = 11.51$) than the unclassified type group ($M = 75.68$, [73.11, 78.25], $SD = 15.49$) and a score that was almost significantly (adjusted $p = .199$) higher than that of melancholic type group ($M = 77.77$, [73.57, 81.97], $SD = 13.65$). Similarly, the mean of the PS score differed significantly between the depression subtypes ($F(2, 212) = 9.21$, $p < .001$, $\eta_p^2 = 0.08$, [0.02, 0.15]); post-hoc test found that the atypical type group had a significantly higher PS score ($M = 25.25$, [23.17, 27.33], $SD = 5.27$) than the unclassified ($M = 20.85$, [20.03, 21.68], $SD = 4.98$) and the melancholic type groups ($M = 21.14$, [19.70, 22.57], $SD = 4.67$). However, there were no significant group differences on the IS score.

Discussion

Reliability and Validity

The IPS was developed to assess the cognitive and behavioral style relating to MTD. In relation to this the aim of the present study was to confirm the reliability and validity of the IPS. Consistent with our prediction, the IPS demonstrated excellent reliability and strong convergent and discriminative validity, with regard to the following two points. First, the IPS, including its two superordinate factors, positively correlated with depressive symptoms. These correlations imply that people displaying high Interpersonal sensitivity/Privileged self are vulnerable to depression. Second, IPS scores significantly differed according to depression type. Specifically, the total IPS score obtained by the atypical depression group was higher than obtained by the unidentified groups, and the PS score obtained by the atypical depression group was higher than those obtained by the unidentified and melancholic type groups. Because atypical depression is presumed to be a part of MTD (Abe, 2012; Natsume, 2012), this result supported our prediction that the IPS scores manifest differently in MTD and melancholic depression.

According to Kato et al. (2011), MTD seems prevalent in many countries other than Japan. Hence, further

cross-cultural studies on MTD are necessary, particularly with respect to etiological or preventive aspects. Moreover, MTD has become a subject of discussion in organizations in Japan. Therefore, studies involving office workers must also be conducted.

In conclusion, IPS may well represent the characteristics of MTD. In particular, it is suggested that PS is a major characteristics of MTD. As discussed above, Interpersonal sensitivity/Privileged self is, presumably, a vulnerability factor for MTD. To our knowledge, there are no instruments adequately measure cognitive-behavioral features of people with MTD to date. In relation to this, IPS allows researchers to examine Modern type depression syndrome.

My questions

1. Have cases of MTD been identified in your country?
2. If cases resembling MTD have been identified in your country, are they regarded as problematic?.
3. If you are interested in MTD, would you like to collaborate on cross-cultural studies with us?

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Table 1 A comparison of Melancholic depression and Modern type depression in Japan.

	Melancholic depression	Modern type depression
Ages	Middle age (born before 1970)	Young age (born after 1970)
Temperaments	Shuchaku-kishitsu (Shimoda, 1932) Typus melancholicus (Tellenbach, 1961) Avoidant type depression (Hirose, 1977)	Student apathy (Walters, 1971) Withdrawal neurosis (Kasahara and Kimura, 1975) Modern type depression (Matsunami and Yamashita, 1991) Immature type depression (Abe et al., 1995)
Characters	Attachment to rules Love for order, models Sympathetic Obsessive Honest Hard worker	Attachment to self without roles Feel distressed against rules/order Negative feeling to order or model Vague sense of almighty Not hard worker to begin with
Symptoms	Agitation or retardation Exhaustion and guilt Well prepared suicide	Fatigue and not feel good enough Avoidance and blame others Impulsive suicidal action
Therapeutic relationship	Resist to diagnosis of depression When recovered, learn from experience of depression Hard to depart from diagnosis (like to stay in depression)	Cooperate diagnosis of depression Tend to check depressive symptoms
Drug response	Usually good Complete remission	Partial response
Cognition	I as a teacher to I as "man who experienced depression"	Life style or depression Hard to depart from "I suffering from depression"
Prognosis	Good response to rest and antidepressants Ambivalent about change of environment	Become chronic ill only with rest and antidepressants Change of environment rapidly improves symptoms

Cited and adapted from Tarumi (2005) and Kato et al. (2011)

Table 2 Examples of results relating to organization of the cognitive-behavioral features of MTD

Interpersonal Sensitivity

- 1 Blaming another person when one is hurt by what somebody else has said.
- 2 To lack self-accusation, being overly punitive, and opting to put the blame on others.
- 3 Blaming others when making a mistake.
- 4 A strong avoidance tendency.

Privileged Self

- 5 To prioritize one's feelings and circumstances.
- 6 It is difficult to do what he/she does not want to do, although it is easy to do what he/she wants to do.
- 7 A dislike for being bound by norms.

Insisting on depression

- 8 Obtaining a medical certificate indicating depression.
- 9 Insisting on "being depressed" or suggesting that it "may be depression."

Table 3 Examples of Items on the Interpersonal Sensitivity/Privileged Self Scale

 Interpersonal Sensitivity
Evaluation apprehension ($\alpha = .91$)

5 I worry that those around me may complain about me or look at me strangely.

30 I am afraid that those around me will have a poor image of me.

Overreaction to negative feedback ($\alpha=.86$)

48 I think I actively take on challenges even if I am likely to make a mistake. *

33 I think I often do nothing to avoid making mistakes.

Avoidance ($\alpha=.70$)

44 If I am criticized by those around me, I cannot forget about it.

54 If I am upset by those around me, I cannot easily take it out of my mind.

Privileged Self

Sense of victimization ($\alpha = .71$)

18 I think I am being treated unfairly in my everyday life.

52 I think there are a lot of mean people around me.

Disobedience ($\alpha = .69$)

26 I think I often feel irritated if I am criticized or admonished.

38 I have a bad mood if things do not go my way.

Results dependence ($\alpha = .63$)

46 I think that results and achievements are unrelated to my own worth. *

39 I think people's worth is determined by their results and achievements.

 Note. Each number represents the original number of candidates.

* show the reverse-scored item.