

Interpersonal problems among psychiatric outpatients and non-clinical samples

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INTRODUCTION The aims of this study were two-fold; to investigate the validity and reliability of the Thai version of the Inventory of Interpersonal Problems (IIP) and to compare the characteristics of the interpersonal problems experienced in a non-clinical sample and psychiatric outpatients.

METHODS A total of 689 subjects (452 non-clinical sample and 237 psychiatric outpatients) completed the IIP-32 and IIP-64, Symptom checklist-90 (SCL-90) and 16 Personality Factor (16 PF) Questionnaire, after which a four-week retest was carried out. Cronbach's alpha was used for internal consistency and the intra-class correlation coefficient was used to determine test-retest reliability. Factor analysis of the IIP sub-scales and Pearson's correlation were used for construct and concurrent validity.

RESULTS Both versions of the IIP showed good internal consistency. Factor analysis revealed two factors that corresponded to the circumplex property. The expected correlation between the SCL-90 and 16 PF subscales reflected the level of concurrent validity. There was a significant difference in the cold, socially-inhibited and self-sacrificing sub-scales between the non-clinical and clinical samples, while major depressive disorder was found to have a significantly higher score in the subscales of the control dimension, i.e. the non-assertive, socially inhibited and self-sacrificing sub-scales, than the neurotic and non-clinical groups, whereas, the neurotic group differed from the normative sample in terms of the affiliation axis.

CONCLUSION The IIP-64 and IIP-32 demonstrated their reliability and are suitable for use in either clinical or non-clinical setting.

Keywords: clinical, IIP, interpersonal problems, non-clinical
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INTRODUCTION

Interpersonal behaviour is the most common issue studied in the area of psychopathology, while interpersonal problems are usually considered an outcome to be considered pre- or post treatment. However, these problems may reflect personality traits or personality disorders related to the developmental process within the attachment system;⁽¹⁾ for example, insecure attachment may reveal itself interpersonally when a person shows domineering/controlling, vindictive, cold, socially avoidant or non-assertive behaviour, or it may correspond to ephemeral problems related to an existing psychopathology such as major depression, anxiety disorders, adjustment reaction and psychotic disorders. With regard to clinical disorder, whether or not it is regarded as cause or effect, interpersonal problems always become one of the targets of treatment.

In order to demonstrate the effectiveness of any given treatment in reducing patients' interpersonal problems, a valid and reliable measurement needs to be employed. To serve this purpose, a number of measurements assessing interpersonal styles, behaviours, motives and problems have been developed.⁽²⁻⁴⁾ Horowitz et al developed the Inventory of Interpersonal Problems

(IIP) in 1988,⁽⁵⁾ based on the proposal of an interpersonal behaviour concept known as 'interpersonal circumplex' by Leary,⁽⁶⁾ Benjamin^(7,8) and Wiggins,⁽⁹⁾ in which interpersonal behaviours are arranged in a circular fashion, creating intersections on two axes – the control axis (domineering-submissive) and affiliation axis (hostile-friendly). According to Sullivan's theory, the intersection of the two axes creates a number of axes in each quadrant; however, only eight sub-axes were used (Fig. 1). Originally, common interpersonal problems were collected and an interpersonal inventory comprising 127 items was created, and Alden et al later used eight items for each octant (64 items for eight octants), starting with 'domineering' on the top, and moving counter-clockwise as follows: domineering/controlling, vindictive, cold, socially avoidant, non-assertive, overly accommodating, self sacrificing and intrusive, in which the related characteristics in adjacent octants were positively correlated while the negatively correlated octants were found opposite. This current IIP-64 was tested by Horowitz et al.^(10,11)

In clinical application, the IIP-64 has been employed for when interpersonal styles or problems are of concern, especially in fields involving psychotherapy research.⁽¹²⁻¹⁸⁾ The IIP-64 is

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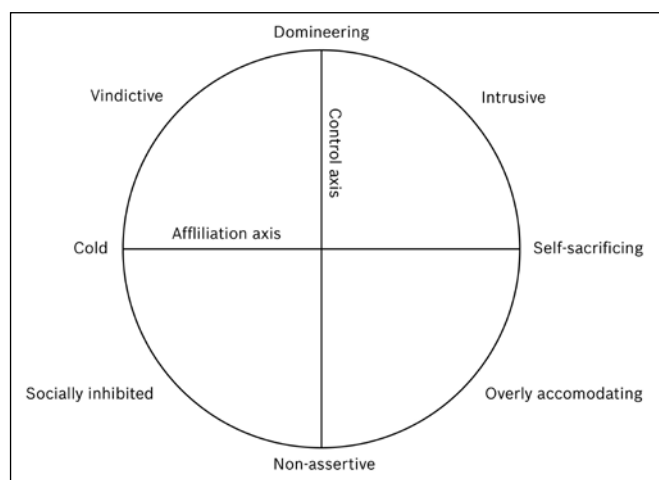


Fig. 1 The interpersonal circumplex.

sensitive to changes in brief psychotherapy, and it also helps distinguish between patients who are able to complete and those who drop out.⁽¹⁹⁻²⁵⁾ However, interpersonal difficulties require a longer period of time to improve. Studies have shown that it takes at least a year of treatment before any significant change becomes apparent.^(14,15,26,27) Recent findings by Bjerke et al,⁽²⁸⁾ who explored interpersonal problems in Norwegian psychiatric outpatients, found that those with the most severe problems, characterised by low assertiveness (low agency or control) that is related to high interpersonal distress, are also the most distressed with regard to interpersonal problems. Apart from using the IIP as an outcome measure, both forms (IIP-64 and IIP-32) can be used to screen for personality disorders, and have been found to be promising in a Spanish sample.⁽²⁹⁾

The aim of our research was to investigate the psychometric properties of the Thai version of the IIP, creating a norm reference for samples taken from all parts of the country. Furthermore, we aimed to compare the interpersonal problems found in three different samples: normative, depressive disorder and neurotic disorder (only anxiety and somatoform disorders were included) patients, and hypothesised that the patient sample would report more interpersonal problems, particularly on non-assertiveness, than the non-clinical sample. Moreover, the depressive disorders group was expected to report more interpersonal problems than the neurotic group.

METHODS

A non-clinical sample of 452 subjects was recruited from the community, and a national survey using stratified sampling techniques was conducted in order to represent the Thai norm, with the stratification carried out according to the geographic region (north, upper-northeast, lower-northeast, south and central) and the size of the residential community. Proportional sampling was performed in each province in accordance with the population reported in December 2009. A total sample size of 452 (226 male and 226 female) was used for the study, with 112 participants in each of the four different age groups. The representative sample was relatively similar to the Thai norm in

terms of education level, marital status and income per month, i.e. college level 9.3 % vs. 9.5% in the Thai norm, single 38.1% vs. 36.8 % in the Thai norm, and a mean income per month of 8,027 baht vs. 7,749 baht in the Thai norm, respectively.

For the clinical sample, we recruited 237 outpatients who had been diagnosed with major depressive, anxiety and somatoform disorders, using the Mini-International Neuropsychiatric Inventory (MINI). The anxiety disorders recruited for this study included panic disorder, generalised anxiety disorder, phobic disorder, obsessive compulsive disorder and post-traumatic stress disorder. The somatoform disorders recruited for this study included somatisation disorder and hypochondriasis; some also had comorbidity of anxiety disorder and somatoform disorder. Only anxiety and somatoform disorders were used to represent the neurotic group because these two disorders are common and we needed to combine both categories into the same neurotic group in order to balance the sample with the comparative major depressive disorder group.

Clinically stable patients were also invited to participate in the study, but potential participants were excluded if they revealed other diagnoses in addition to the abovementioned disorders, such as psychosis, bipolar or substance-related disorders. In addition, participants with comorbidity were excluded, except for cases of comorbidity with anxiety and somatoform disorders. Among the recruited patients, 60% were females aged 18–74 years (mean 42.11 ± 16.08 years). According to the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV Axis I),⁽³⁰⁾ 54.9% of the sample were suffering from anxiety disorders and/or somatoform disorders, and 45.1% from major depressive disorders. For compliance reasons, only the IIP-32 was used on the clinical sample.

We found a lower reliability for the measurement in the clinical compared to the non-clinical sample, as the clinical sample tended to have a poorer attention span, especially depressed patients who usually took a longer time to complete the same questionnaire than those in the non-clinical sample. Therefore, the shorter questionnaire (IIP-32) was found to be more suitable for the clinical sample. Moreover, compared to the IIP-64, the IIP-32 is still considered to be adequate in terms of reliability and validity.

The IIP, which comes in two versions – the IIP-64 and IIP-32, is a self-report instrument designed to assess problems in the areas of interpersonal interactions as reflected in difficulties in executing particular behaviours.⁽¹²⁾ The instrument is based on common interpersonal theories of behaviour that have a long tradition in the personality and social psychology fields.⁽³¹⁾ All items were rated on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely). IIP-32 is a subset of the items contained in IIP-64; in this study, the IIP-32 and IIP-64 instruments were scored on the basis of the same set of responses to the full 64 items, with eight subscales reflecting interpersonal problems characterised by the following traits: domineering (DO), vindictive (VI), cold (CO) socially inhibited (SI), non-assertive (NA),

overly accommodating (OA), self-sacrificing (SS) and intrusive/ needy (IN).

The following clinical interpretations related to the DSM-IV rely on a wealth of interrelated empirical data collected by Horowitz et al.⁽¹⁰⁾ Subjects who obtain high scores for the 'domineering' subscale find it difficult to relax their control, and describe themselves as manipulative and controlling, and thus, it is difficult for them to listen to another person's point of view without challenging it. A loss of control feels threatening to them, as it produces feelings related to loss of dignity, worth or self-respect. Those with anti-social and narcissistic personality disorders obtain high scores on this scale. 'Vindictive' describes the problems associated with hostile dominance, in which a person is quick to experience and express anger/irritability, as well as fights, distrusts and is suspicious of others. People with anti-social and narcissistic personality disorders obtain high scores on this scale. A person who scores high on the 'cold' subscale has minimal feelings of affection for or pays little attention to others, and tends to find it difficult to make and maintain long-term commitments – this group includes people who are socially inhibited and who express feelings of anxiety, timidity or embarrassment in the presence of others. People with schizoid personality disorders obtain high scores on this scale. 'Non-assertive' refers to a severe lack of self-confidence and self-esteem, and people who score high on this scale tend to describe themselves as having self-doubt and being unassertive. They tend to have problems initiating and being the centre of attention. People with dependent personality disorders obtain high scores on this scale. 'Overly accommodating' describes problems with excess friendliness and submissiveness. People in this group attempt to win the approval of others by being inoffensive and unassertive in order to maintain friendly relations. People with dependent personality disorders obtain high scores on this scale. Those who score high in the 'self-sacrificing' scale are excessively affiliative, i.e. they regard themselves as warm, nurturant, kind, sympathetic and forgiving, whereas 'intrusive/needy' people tend to have difficulty with a 'friendly dominance' characteristic. People with histrionic personality disorders score high on this scale, and often describe themselves as friendly, outgoing and sociable.

The version used in this study was translated into Thai in the following way. First, permission for translation was sought from the author of the IIP. Upon approval, the IIP was translated into the Thai language, after which a bilingual school teacher who was not familiar with the questionnaire back-translated the Thai version. The two versions were then compared and discrepancies discussed and re-processed until a consensus translation was obtained. A field test of 30 students and psychiatric patients who were attending psychotherapy at the centre and were not part of the wider study, was carried out with both the IIP-64 and IIP-32 questionnaires, in order to determine how well they understood the questions. All the test samples responded positively to the questionnaires; apart from a few

corrections made in spelling and grammar, no major changes were carried out as part of the process.

The Symptom Checklist-90 (SCL-90)⁽³²⁾ is a self-reporting mechanism that contains 90 items covering psychological problems and symptom distress. Each item assesses symptom severity on a 5-point Likert scale, with 0 = not at all and 4 = extremely. The measurement reports nine symptom characteristics: somatisation; obsessive-compulsive; interpersonal sensitivity; hostility; depression; anxiety; paranoid ideation; phobic anxiety and psychoticism. For this study, the measurement tool was developed to be utilised on people aged 15–67 years. Using the SCL-90, abnormality can be analysed using the following two methods: (1) by combining the total score with the score for each dimension, and then converting the result into a standardised t-score, where a score > 60 is considered abnormal; and (2) by comparing the score for each dimension with the norm.⁽³³⁾ For this study, when measuring abnormality between genders, the total score and the score for each dimension were calculated for each gender in order to establish the t-scores. To measure the level of abnormality for each age group, the t-score was calculated according to the norm for each group. The Thai version was tested for validity by using the known group technique, which has been found to show good results.⁽³³⁾

The 16 Personality Factors Questionnaire (16 PF) test developed by Cattell⁽³⁴⁾ is a personality measurement tool, and categorises personality into the following eight dimensions or sixteen characteristics: reserved vs. outgoing; low intelligence vs. high intelligence; submissive vs. dominant; and self-assured vs. apprehensive, among others. These characteristics show each individual's level of adjustment, problem-solving ability and event perception. The 16 PF has 187 items with three choices for each item. The results are rated by giving a score of 1 or 2 and then comparing the results with a standard score. Interpretation is reproduced using graphical sten scores. The Thai version of 16 PF was developed by Cheuaphakdi and Phornphatkul,⁽³⁵⁾ and has been widely used to assess personality and its relationship with clinical factors, as well as for personnel selection. The Cronbach's alpha for this study was 0.61–0.88, with certain subscales chosen for testing the convergent and discriminant validity of SCL-90; for example, 'perfectionism' is expected to have a positive relationship with 'obsessive-compulsive', and likewise, 'apprehension' and 'tension' are positively correlated with 'anxiety' or 'phobic anxiety'. 'Hypervigilance', on the other hand, should demonstrate a more positive association with 'paranoid ideation' than other subscales.

According to Horowitz et al, a large general concern in the principal component analysis of IIP items is individual differences in style in response to the format of the questionnaire, rather than differences in perceived distress.^(12,36) As suggested by Alden et al, to account for this, each item score was ipsatised by calculating how much it deviated from the participant's mean scores across all items.⁽¹¹⁾ Thus, the ipsatised score indicates the extent to which a given subscale is problematic for the participant,

Table I. Total and subscale scores for the IIP-64 non-clinical sample (n = 452) compared to Horowitz et al's study (n = 800).⁽¹⁰⁾

IIP subscale	Mean \pm SD (min, max)	
	Present study	US study ⁽¹⁰⁾
Domineering (DO)	7.69 \pm 5.24 (0, 25)	4.9 \pm 4.5
Vindictive (VI)	8.50 \pm 5.50 (0, 29)	5.3 \pm 5.1
Cold (CO)	9.26 \pm 6.36 (0, 28)	5.7 \pm 5.1
Socially inhibited (SI)	10.50 \pm 6.20 (0, 28)	6.5 \pm 6.4
Non-assertive (NA)	12.82 \pm 6.58 (0, 31)	7.4 \pm 6.1
Overly accommodating (OA)	11.99 \pm 5.88 (0, 30)	7.8 \pm 5.3
Self-sacrificing (SS)	11.79 \pm 5.80 (0, 31)	8.2 \pm 5.5
Intrusive/Needy (IN)	9.13 \pm 5.53 (0, 27)	5.7 \pm 4.8
Total	81.70 \pm 37.47 (0, 207)	51.6 \pm 34.3

SD: standard deviation; min: minimum; max: maximum

relative to the other subscales. According to Paddock and Nowicki, the ipsatising procedure has also been shown to improve the circumplex properties of the interpersonal measures⁽³⁷⁾ when compared to the raw scores. Therefore, ipsatised scores were mainly used for data analysis in this study. Factor analysis was used to investigate the factor structure, while Pearson's correlation coefficients were used for concurrent validity with the SCL-90 and 16 PF variables, as well as to establish any association between the subscales for the IIP-64 and IIP-32 tests. An intra-class coefficient (ICC) was used to calculate the test-retest reliability, since it was thought to be more appropriate than Pearson's correlation coefficients.⁽³⁸⁾ The Statistical Package for the Social Sciences version 17 (SPSS Inc, Chicago, IL, USA) was used for all the analyses in this study.

RESULTS

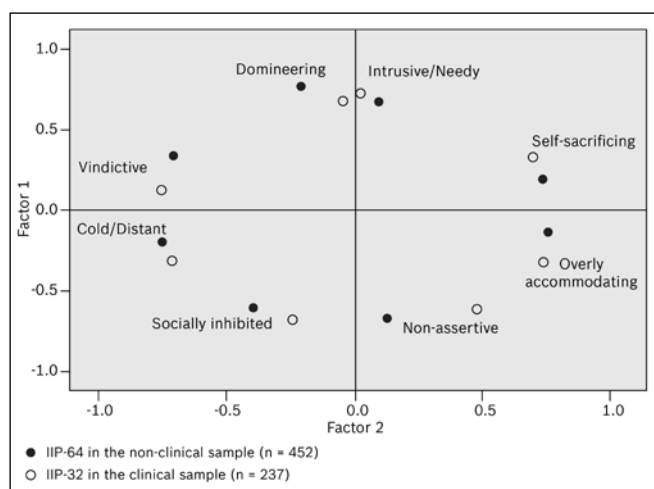
Tables I and II show the mean and standard deviation of the IIP scores, which ranged from 7.69 (for DO) to 12.82 (for NA), in the non-clinical sample using IIP-64, and from 3.97 (for DO) to 7.87 (for NA) for the clinical sample using IIP-32. On average, the IIP-64 scores of the Thai sample were higher than those of the sample (n = 800) in Horowitz et al's study conducted in the United States (US);⁽¹⁰⁾ however, the highest subscale scores were comparable to those from the US sample, i.e. non-assertive, overly accommodating and self-sacrificing.

In terms of reliability, Cronbach's alpha score for the 'raw' IIP was 0.74–0.82, while that for the overall IIP-64 was 0.74–0.95 and that for IIP-32 was 0.74–0.87 in the non-clinical sample. Pearson's correlation coefficient for the IIP-64 and IIP-32 subscales was 0.86–0.93, while in the clinical sample, Cronbach's alpha was 0.54–0.71, with an overall alpha of 0.88. The test-retest reliability of the IIP-64 subscale using ICC ranged from 0.68 (for NA) to 0.76 (for DO), and from 0.68 to 0.81 for the total score. Using the IIP-32, the ICC ranged from 0.60 (for VI) to 0.73 (for SO), and from 0.60 to 0.74 for the total score. Pearson's correlation coefficients for the raw subscale scores and ipsatised (individual) subscale scores are shown in Table II. For the raw

Table II. Total and subscale scores for the IIP-32 clinical sample (n = 237).

IIP-32 subscale	Min	Max	US study ⁽¹⁰⁾
Domineering (DO)	0	16	3.79 \pm 3.42
Vindictive (VI)	0	16	5.83 \pm 4.12
Cold (CO)	0	16	6.37 \pm 3.81
Socially inhibited (SI)	0	16	6.77 \pm 3.71
Non-assertive (NA)	0	16	7.87 \pm 3.71
Overly accommodating (OA)	0	16	7.68 \pm 3.54
Self-sacrificing (SS)	0	16	7.67 \pm 3.90
Intrusive/Needy (IN)	0	16	5.82 \pm 3.42
Total	0	113	51.80 \pm 19.35

Min: minimum; Max: maximum

**Fig. 2** Factor structure of the IIP.

scores, all the subscales showed a positive correlation with each other. For the ipsatised scores, where only the complaint factor controlled the use of the subscales adjacent to each other, there was a positive correlation, whereas the opposite subscale had a negative correlation, and the subscale located at 90 or 270 degrees (orthogonal octant) was expected to be uncorrelated. For example, for DO vs. VI and IN, $r = 0.181$ and 0.232 , respectively ($p < 0.01$); with an orthogonal CO, $r = -0.098$; and with NA (the opposite, 180 degrees), $r = -0.475$.

Table III shows the correlation between the ipsatised scores and the SCL-90 and 16 PF subscales. DO was found to negatively correlate the most with somatic, obsessive-compulsive, interpersonal sensitivity and depression behaviour, followed by IN and SI, which correlated the second most. Of the 16 PF scores, no IIP subscale associations with openness to change (Q1) and perfectionism (Q3) were found; however, DO was negatively correlated with tension (Q4) ($r = -0.114$, $p < 0.05$). CO and SI were positively correlated with self-reliance (Q2) ($r = 0.11$, $p < 0.05$ and $r = 0.16$, $p < 0.05$, respectively), whereas IN was negatively correlated with self-reliance (Q2) ($r = -0.22$, $p < 0.01$).

There was a significant gender difference in the CO and SS scores, and by age group, the VI, CO and SS scores were found to be significantly different from the rest of the groups ($F 5.02$,

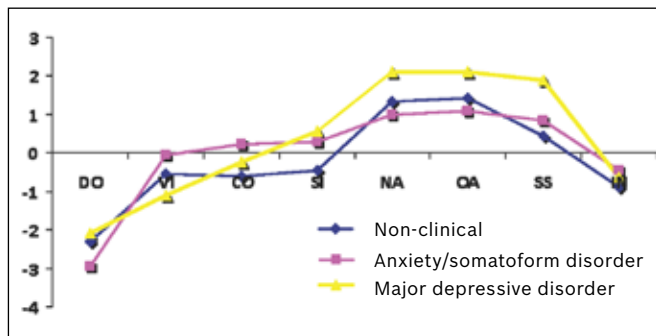
Table III. Correlations between the IIP-64, SCL-90 and 16 PF subscales (n = 452).

	Somatic	Obsess	Inter.sen	Depress	Anxiety	Hostile	Phobic	Paranoid	Psychopath	Q1 [†]	Q2	Q3	Q4
DO	-0.107*	-0.142**	-0.105*	-0.134**	-0.021	0.031	0.090	-0.076	-0.098*	0.084	-0.038	0.074	-0.114*
VI	0.090	-0.060	-0.031	0.000	0.058	0.029	0.093*	0.059	0.038	-0.080	-0.028	0.012	0.017
CO	-0.010	-0.080	-0.099*	-0.032	-0.066	-0.109*	-0.036	-0.008	-0.027	-0.034	0.110*	-0.026	0.000
SI	0.045	0.120*	0.094*	0.098*	-0.001	-0.002	-0.065	0.066	0.092	-0.034	0.158**	-0.092	0.045
NA	0.055	0.029	0.048	0.024	0.081	-0.056	-0.037	-0.018	0.020	-0.033	0.080	-0.067	0.037
OA	-0.047	0.053	0.021	0.011	-0.090	0.019	-0.046	-0.044	-0.025	0.010	-0.011	0.050	0.013
SS	-0.074	0.030	-0.043	-0.028	-0.038	-0.015	-0.036	-0.072	-0.051	0.007	-0.074	0.043	-0.039
IN	0.054	0.047	0.120*	0.063	0.081	0.130**	0.059	0.113*	0.081	0.084	-0.216**	0.012	0.036

*p < 0.05, **p < 0.01

†Q1: openness to change; Q2: self-reliance; Q3: perfectionism; Q4: tension

DO: domineering; VI: vindictive; CO: cold; SI: socially inhibited; NA: non-assertive; OA: overly accommodating; SS: self-sacrificing; IN: intrusive/needly

**Fig. 3** Graph shows the comparison of mean scores in the three groups using ipsatised scores.

$p < 0.001$, $F 4.57$, $p < 0.001$, $F 5.07$, $p < 0.001$, respectively). By marital status, the widows and divorced group were found to have significantly higher scores for the DO, VI, CO and OA subscales. When the non-clinical and clinical groups were compared using the ipsatised scores, only IIP-32 was used, and the scores for CO, SI and SS were significantly different between the two groups ($t = 2.523$, $p = 0.012$, $t = 3.78$, $p < 0.001$, and $t = 5.095$, $p < 0.001$, respectively). The total IIP-32 score was significantly higher in the clinical group than in the non-clinical group ($p < 0.01$), with the effect size of 0.6 indicating a relatively large effect (using Cohen's $d^{(39)} = 2t/\sqrt{df}$ or $orM1-M2/\sigma$ formula).

The group with major depressive disorders had significantly higher scores for DO, NA and SS than the neurotic group ($t = -2.475$, $p = 0.014$; $t = -3.141$, $p = 0.002$; $t = -2.610$, $p = 0.010$, respectively), except for VI, where the neurotic group scored higher than the major depressive group ($t = 2.62$, $p = 0.009$). When comparing the normative and neurotic samples, there were differences in the scores for DO, CO and SI, where $t = 2.50$, $p = 0.013$; $t = -2.93$, $p = 0.004$; $t = -3.03$, $p = 0.003$, respectively (Fig. 3).

DISCUSSION

The results from the Thai version of the IIP tests were consistent with other previous studies, such as the original version by Horowitz et al, as well as Dutch and Swedish versions of the IIP.^(26,40,41) Our results were in line with those reported by Weinryb et al,⁽⁴¹⁾ in that the ipsatised data yielded two factors.

The two-factor model corresponded with the two orthogonal dimensions of control (dominance-submissive) and affiliation (friendly-hostile), as proposed by Wiggins⁽⁹⁾ and other interpersonal theorists.^(11,12,31) When comparing the IIP-64 from the normative sample and the IIP-32 from the clinical sample, we found a slightly similar structure despite the fact that there were higher scores for all the subscales in the clinical sample, indicating that both versions revealed construct validity across different samples.

It is worth noting that the internal consistency of the OA and IN subscales was found to be relatively low compared to the other subscales, especially for IIP-32. This has also been found in other IIP cross-cultural studies, including the original IIP,^(26,40,41) and may be related to the relatively small number of items per subscale and a possible response bias. Our previous studies^(42,43) revealed the subscale reliability to be sensitive to negative or double-negative items, and both of these subscales contained such double-negative items; for example, item 1: 'It's hard for me to say "no" to other people', and Item 20: 'It's hard for me to be assertive without worrying about hurting the other person's feelings'. All in all, the overall coefficient alpha for both the IIP-64 and IIP-32 in both the non-clinical and clinical samples was acceptable. A four-week test-retest using ICC revealed the coefficients to be 0.81 for IIP-64 and 0.74 for IIP-32, indicating an acceptable value. Pearson's correlation was used for comparison with the original US sample,⁽¹⁰⁾ and the coefficient was found to be 0.68 in the current study vs. 0.78 in the US sample; however, in the latter, the retest was carried out over a shorter period of time (median = 7 days), indicating that our Thai version is a comparable and reliable measure.

Using the SCL-90 and 16 PF tests, the IIP revealed that psychopathology was related more to the submissive style, as shown by its negative correlation with the domineering style. This has been supported by previous studies.^(44,45) As expected, cold and socially inhibited behaviours, where individuals steer themselves away from social or interpersonal interaction, predicted the solitary behaviour of the self-reliance subscale. The opposite behaviour of social withdrawal is intrusive behaviour, which was found to be negatively correlated with self-reliance. These results confirm the discriminatory validity of the IIP.

When comparing non-clinical with clinical data, we found that the patient group exhibited more interpersonal problems than those in the non-clinical group. Psychiatric patients with major depressive disorders seem to face greater problems in the submissive area (socially inhibited, non-assertive and self-sacrificing) than the neurotic (anxiety and/or somatoform) group. The same was found when taking into consideration the depression subscale of the SCL-90 scale, which showed a negative correlation with domineering but a positive correlation with socially inhibited behaviours, confirming the importance of assertiveness to depression.

The submissive area describes problems associated with a lack of self-confidence and self-esteem, with self-doubt and a lack of assertiveness, and also includes difficulties with taking the initiative and being the centre of attention. In addition, individuals in this area tend to put themselves at risk of being taken advantage of owing to their generosity and tendency to not take offence. These results have been supported by a number of other studies, which found that a submissive personality trait tends to lend itself to a risk of developing depression compared to other personality traits.^(44,45) A recent study by Bjerke et al⁽²⁸⁾ showed that psychiatric patients experience all octants of interpersonal problems, especially assertiveness. In a comparison between clinical groups, submissive and dominant styles played a more distinct role in the more significant depressive disorders than in neurotic disorders. It has been argued that a submissive behaviour is central to the aetiology of depression.⁽⁴⁴⁻⁴⁷⁾ Similarly, cognitive,⁽⁴⁸⁾ interpersonal⁽⁴⁹⁻⁵¹⁾ and psychodynamic models view submissive behaviour as a way to perceive relatedness, thus leading individuals to be vulnerable to depression. In addition, it is not only submissive factors that have an impact on depression; we found that cold behaviour also correlated significantly. Alden and Bieling⁽⁵²⁾ postulated that there are two different types of vulnerability to depression; one is related to dependency and the other to autonomy. Dependent-type individuals score high on overly accommodating behaviour while autonomy types score high on cold and socially inhibited behaviours.

Uhmann et al attempted to specify the interpersonal problems found in general anxiety disorders by hypothesising that those with this disorder would demonstrate high levels of non-assertive, exploitable (overly accommodating) and overly nurturant (self-sacrificing) behaviour; however, their results did not support this.⁽⁵³⁾ In this study, the anxiety group differed from the normative sample along the affiliation axis of the line of control axis. In addition, among patients in the depression group, those with neurotic disorders expressed more cold and vindictive behaviour than those in the general group. The depression group also exhibited more submissive behaviour than the neurotic and normative samples. The hypothesis with regard to the impact of the affiliation axis (cold and vindictive behaviours) on anxiety or neurotic disorders has yet to be clearly explained.

The current study is not without its limitations. When comparing the use of IIP between the clinical groups, we could not entirely exclude depressive conditions from the neurotic patients, as the DSM-IV uses the categorical diagnostic approach. Moreover, a certain level of depression that has reached the criteria of major depressive disorder can be found in neurotic disorder patients; thus, adding a dimensional measure for either depression or anxiety in the future may help to overcome this flaw in the categorical diagnosis of DSM.

In summary, the Thai version of IIP demonstrated an acceptable reliability and validity. Both the IIP-64 and IIP-32 showed a factor structure in accordance with the circumplex property. Therefore, they are suitable for use in future research, both for non-clinical and clinical samples. Depression has a particular pattern of submissiveness, revealing non-assertive, socially inhibited and overly accommodating behaviours, as found in other studies. However, neurotic disorders, including anxiety and somatoform disorders, exhibit inconsistent results.

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