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# Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2

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# Discriminating the Histrionic Personality Disorder Through the Recognition Need Factor From the Dimensional Clinical Personality Inventory 2

## Abstract

Investigating discriminative capacity is crucial to determining a measure's usability and establishing a clinically useful cutoff for decision-making. This study aimed to examine the Dimensional Clinical Personality Inventory-2 (IDCP-2) factors' capacity to identify individuals according to the presence of an HPD diagnosis. We selected 339 individuals from a dataset comprising 4,854 adults, reaching a statistical power of .98. We administered five HPD-related factors from the IDCP-2. Most IDCP-2 factors could identify individuals based on HPD pathological traits, as those diagnosed with HPD had the highest mean scores in the factors, except for the Interpersonal Superficiality factor. Intergroup comparisons and regression analysis indicated that the Need for Recognition factor was the most discriminating indicator of HPD pathological traits. We provide a cutoff to be clinically employed professionals for HPD screening.

***Keywords:*** Cluster B, externalizing disorders, self-report, pathological traits.

# Discriminación del Trastorno Histriónico de la Personalidad a Través del Factor de Necesidad de Reconocimiento del Inventario Clínico Dimensional de Personalidad 2

## Resumen

Investigar la capacidad discriminatoria es crucial para determinar la usabilidad de una medida y establecer un límite clínicamente útil para la toma de decisiones. Este estudio tuvo como objetivo examinar la capacidad de los factores del Inventario Clínico Dimensional de Personalidad 2 (IDCP-2) para identificar a las personas según la presencia del diagnóstico de HPD. Seleccionamos 339 individuos de un conjunto de datos compuesto por 4.854 adultos, alcanzando una potencia estadística de .98. Administramos cinco factores relacionados con HPD del IDCP-2. La mayoría de los factores IDCP-2 pudieron identificar a las personas en función de los rasgos patológicos de HPD, ya que las personas diagnosticadas con HPD tenían las medias más altas en los factores. La excepción a esto fue el factor de Superficialidad Interpersonal. Las comparaciones intergrupales y el análisis de regresión indicaron el factor Necesidad de reconocimiento como el indicador más discriminatorio de la presencia de rasgos patológicos de HPD. Ofrecemos un límite que puede ser empleado clínicamente por profesionales para detectar la presencia de HPD.

***Palabras clave:*** Grupo B; trastornos de externalización; autoinforme; rasgos patológicos.

## Introduction

Histrionic Personality Disorder (HPD) has gone through different terminologies and descriptive changes throughout past editions of the DSM. These changes primarily stem from the need to specify diagnostic criteria and differentiate HPD from other personality disorders, such as narcissistic and borderline (Bakkevig & Karterud, 2010; Novais et al., 2015). HPD is classified within the externalizing antagonist spectrum alongside paranoid, narcissistic, and borderline personality disorders in modern taxonomic models (Kotov et al., 2017, 2018). However, some proposals group HPD with other personality disorders, such as antisocial and narcissistic, according to DSM-5 Sections II and III (Anderson et al., 2014). The proximity among these disorders creates a demand to clearly and objectively establish the composition of the HPD.

The prevalence of HPD in the general population is estimated at 1.8% (APA, 2013). However, some studies report varying prevalence rates, such as 0.4% in a Norwegian sample (Bakkevig & Karterud, 2010). We conducted our investigation with a sample from Brazil, where only one study has examined the prevalence of personality disorders, reporting a 6.8% rate for any personality disorder exclusively in São Paulo (Santana et al., 2018). This figure may not reflect national rates. The study did not report prevalence rates for individual personality disorders; however, it found a 2.7% prevalence for Cluster B disorders, encompassing antisocial, borderline, histrionic, and narcissistic personality disorders. HPD's diagnostic criteria demonstrate relatively high comorbidity with narcissistic, borderline, and dependent disorders (Bakkevig & Karterud, 2010). The high comorbidity is mainly due to the commonality between diagnostic criteria, such as the need to be the center of attention, seductive behavior, and emotional lability. These traits are also typical of narcissistic personality disorder (Anderson et al., 2014; Kotov et al., 2017; Samuel et al., 2012). Although HPD has a lower prevalence than other disorders, its negative impact is evident in the personal and social difficulties faced by affected individuals (Bockian, 2006; Demopulos et al., 1996; Disney et al., 2012).

HPD profoundly affects individuals, leading to unstable and superficial relationships, emotional volatility, and a distorted self-image, which often drives impulsive and risky behaviors (APA, 2013; Ferguson & Negi, 2014; Furnham, 2014; Novais et al., 2015). These personal challenges may hinder their ability to maintain stable employment and meaningful social connections and pose broader public health concerns. The constant need for attention and approval can strain mental health resources, as individuals with HPD frequently seek therapy or medical attention for emotional distress. Additionally, their erratic behaviors contribute to public health burdens, underscoring the need for targeted mental health interventions and support systems.

The DSM-5 (APA, 2013) identifies HPD as a pattern of emotionality and excessive attention-seeking. It begins in adulthood, and at least five out of eight criteria must be present for the diagnosis. Diagnostic criteria are discomfort when not in the spotlight, inappropriate or provocative sexually seductive behavior, rapid changes and superficial expression of emotions, use of physical appearance to attract attention, overly impressionistic and lacking in detail, theatricality and exaggerated expression of feelings, excessively suggestible, and evaluation of personal relationships as more intimate than they are.

While the categorical model dominates diagnostic approaches, contemporary dimensional models conceptualize HPD as a pathological profile composed of a set of maladaptive traits. Although everyone exhibits these traits to some extent, only a few individuals demonstrate them high enough to be considered pathological (section III from APA, 2013; Kotov et al., 2017). According to empirical evidence from studies based on the dimensional perspective, typical traits of HPD are attention-seeking, manipulation, impulsivity, and

emotional lability (Anderson et al., 2014; Hopwood et al., 2012; Morey et al., 2016; Samuel et al., 2012).

Although a single pathological trait does not characterize the disorder, empirical evidence indicates attention-seeking as the pathological trait most discriminative for the presence of HPD. For instance, Anderson et al. (2014) demonstrated that this trait uniquely contributes to HPD prediction. Similarly, attention-seeking is a key differentiator between HPD and narcissistic personality disorder (Carvalho et al., 2019; Sacvi, Turan, Griffiths, & Ercengiz, 2019). Moreover, the most robust association between attention-seeking and HPD was observed compared to other pathological traits (Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012).

Promising indicators for HPD diagnosis typically relate to attention-seeking traits. However, the number of studies focusing on assessment tools to measure HPD traits is restricted. For instance, Schotte et al. (1993) examined the Minnesota Multiphasic Personality Inventory (MMPI) and reported good area under the curve (AUC) values for three scales: Hypomania (AUC = .70), Social Introversion (AUC = .70), and Histrionic (AUC = .74)). Associations between HPD and the Rorschach test (Klopfer System) were also observed by Blais and Hilsenroth (1998). They found specific indicators (e.g., sum of responses, texture) linked to HPD diagnostic criteria. A similar approach by Furnham (2014) investigated associations between HPD and the NEO-PI-R. Findings indicated extroversion and openness correlated to the HPD pathological traits, specifically Impulsivity and Angry hostilityfacets. Furthermore, a self-report scale specifically designed to assess HPD symptoms (Ferguson & Negy, 2014). Although this measure presented good reliability and internal structure validity, clinical validity was not investigated.

Our study was conducted in Brazil, a middle-income country where assessment tools for HPD are even scarcer than those available internationally. Researchers developed the Dimensional Clinical Personality Inventory-2 (IDCP-2; Carvalho & Pianowski, in press). The IDCP-2 comprises 12 dimensions (dependency, aggressiveness, mood instability, eccentricity, need for attention, distrust, grandiosity, isolation, criticism avoidance, self-sacrifice, conscientiousness, and inconsequence) and respective 47 factors.

This study aimed to evaluate the capacity of IDCP-2 factors related to the attention-seeking trait to discriminate people according to the presence of HPD diagnosis. Focusing on the attention-seeking trait and following previous findings (Abela et al., 2015; Carvalho & Primi, 2015, 2016), we indicated five IDCP-2 factors have the potential to discriminate people with HPD diagnosis: Seduction and manipulation, Emotional intensity, Interpersonal superficiality, Attention-seeking, and Need for recognition. Although we expected the five factors to be discriminative of HPD presence, according to the literature (Anderson et al., 2014; Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012), the Need for attention factor should present higher discriminative power compared to the other factors.

## Methods

### Participants

Participants included 4,854 individuals. A subset of 339 participants was selected based on the groups established for the study and statistical power considerations. This sample size achieved a statistical power of .98 (when effect size $d \geq .20$, $p \leq .05$). Participants were divided into four groups.

The first group (community) consisted of 196 individuals from the general population who reported no history of psychological or psychiatric treatment. Their ages ranged from 19 to 49 years ($M = 23.27$, $SD = 4.79$); 95% were college students, and 50% were men.

The second group (mental health) comprised 38 individuals from the general population who reported receiving psychological or psychiatric treatment. Their ages ranged from 18 to 90 years

(M = 30.60, SD = 16.02); 63.2% were college students, and 76.3% were women.

The third group (PD) was composed of 91 individuals diagnosed with personality disorders other than HPD. Their ages ranged from 19 to 73 years (M = 39.83, SD = 12.66); approximately 80% had completed high school, and 75.8% were women.

The fourth group (HPD) consisted of 14 individuals diagnosed with HPD. Their ages ranged from 21 to 62 years (M = 43.71, SD = 11.66); 80.5% had completed high school, and 92.9% were women.

Outpatients in the PD and HPD groups were diagnosed by psychiatrists at a psychiatric outpatient clinic affiliated with a public university in the State of São Paulo. Diagnoses were based on clinical observations and the Structured Clinical Interview for DSM Axis II (SCID-II).

## Measure

### Dimensional Clinical Personality Inventory 2 (IDCP-2; Carvalho & Primi, in press)

The IDCP-2 is a self-report scale designed to assess pathological traits. It comprises 210 items rated on a 4-point Likert scale. The IDCP-2 includes 12 dimensions subdivided into 47 factors. Focusing on the attention-seeking trait of HPD, we selected the following factors:

- **Seduction and Manipulation** (manipulative behavior often using seduction; 3 items)
- **Emotional Intensity** (belief in experiencing emotions more intensely than others; 3 items)
- **Interpersonal Superficiality** (belief in the ability to establish bonds quickly; 3 items)
- **Attention-Seeking** (exaggerated need to be the center of attention; 4 items)
- **Need for Recognition** (desire to be recognized for one's qualities; 4 items)

Previous studies have demonstrated good psychometric properties for these factors (Abela et al., 2015; Carvalho & Primi, 2016). Internal consistency estimate was verified by employing alpha that varied between .72 (Emotional intensity) and .87 (Interpersonal superficiality), and omega that ranged from .72 to .88 for the same factors.

## Procedure

This study was approved by a Brazilian Research Ethics Committee. All participants provided informed consent before participation. The informed consent form included researchers' contact information for participants interested in receiving psychological care.

Participants in the community and mental health groups were recruited via Google Forms. Data for the PD and HPD groups were collected at a psychiatric clinic linked to a public university in the State of São Paulo.

## Statistical Analysis

Some participants did not answer all IDCP-2 items employed in this study. We applied the equating procedure from a dataset of 4,854 individuals, allowing for the estimation of scores across all dimensions and factors (Thomas, 2011; Wyse & Reckase, 2011). As a result of this procedure, we are presenting the scores on the theta scale.

From this dataset, we selected individuals from the outpatient groups (HPD = 14; PD = 91), individuals from the community who reported a psychiatric disorder diagnosis (mental health = 38), and a community sample without a psychiatric history (community = 196).

Data were analyzed using bootstrapped (k = 1,000) repeated-measures ANOVA to compare pathological trait profiles between groups. The effect size was the $Np^2$, interpreted according to Cohen et al. (2001): ηp2 = small (.01 to .05); moderate (.06 to .13); big (≥.14). We also computed ANOVA post hoc tests (Tukey) and planned contrast ANOVA. For contrast ANOVA, groups were weighted according to severity level (i.e., community < mental health < PD < HPD) as follows: -2 (community sample), -1 (mental health), 1 (PD), and 2 (HPD). As a measure of the effect size,

we calculated the r effect size (r-ES), as follows: r-ES = SqRt(tˆ2/(FBG(dfBG) + dfWG)). We also computed Cohen's d to measure differences between the HPD group and the other three groups'. As previously recommended, regression analyses complemented group comparisons (Davis, 2010). The dependent variable included the four groups in a linear regression analysis, while independent variables comprised IDCP-2 factors and demographic variables (sex, age, and educational level). The enter method was used for regression analysis. The significance level was set at $p \leq .05$.

To determine the optimal cutoff for factors showing significant differences when comparing the group diagnosed with HPD and the community group. We conducted a ROC curve and generated indicators for sensitivity and specificity. We performed the analysis using SPSS 21.

**Results**

Table 1 presents the results of the group comparison and regression analysis.

The highest means were obtained by the HPD group, except for the Interpersonal Superficiality factor. The repeated measures ANOVA indicated differences in all factors except for the Emotional Intensity factor. However, in the post hoc analysis, only the Need for Recognition factor presented significant differences between the HPD and community groups. The Interpersonal Superficiality factor was able to differentiate the HPD and PD groups. Contrast ANOVA indicated the highest scores for the HPD group, with effect sizes ranging from small to large (ηp2 = .02 to .16).

Linear regression analysis, which included IDCP-2 factors as well as sex, age, and educational level, explained 47% of the group variance.

**Table 1.**
*Group comparison and prediction through the IDCP-2 factors*

| Factors | Groups | M | 95%CI $M_{lower}$ | 95%IC $M_{upper}$ | SD | F (df) | $p$ ($\eta_p^2$) $d^1d^2d^3$ | $p_{contrast}$ ($r_{es}$) | $\beta_{linear}$ SE |
|---|---|---|---|---|---|---|---|---|---|
| **Seduction and Manipulation** | Community | -.88 | -1.20 | -.57 | 2.22 | 5.56 (3) | .001 (.05) .08 .11 .59 | .61 (.02) | -.06 (.03) |
| | Mental health | -.95 | -1.78 | -.12 | 2.43 | | | | |
| | Other-PD | -2.00 | -2.38 | -1.53 | 2.12 | | | | |
| | HPD | -.68 | -2.00 | .74 | 2.65 | | | | |
| **Emotional Intensity** | Community | -.97 | -1.26 | -.66 | 1.95 | 1.53 (3) | .21 (.01) .58 .40 .39 | .15 (.10) | .001 (.02) |
| | Mental health | -.65 | -1.32 | .06 | 2.13 | | | | |
| | Other-PD | -.71 | -1.20 | -.26 | 2.34 | | | | |
| | HPD | .15 | -.82 | 1.05 | 1.72 | | | | |
| **Attention-seeking** | Community | -.54 | -.74 | -.33 | 1.48 | 2.94 (3) | .03 (.02) .28 .25 .58 | .92 (.05) | .001 (.04) |
| | Mental health | -.54 | -1.06 | .002 | 1.69 | | | | |
| | Other-PD | -1.04 | -1.37 | -.71 | 1.59 | | | | |
| | HPD | -.12 | -.90 | .74 | 1.64 | | | | |
| **Interpersonal superficiality** | Community | -1.89 | -2.30 | -1.46 | 2.80 | 4.70 (3) | .003 (.04) .04 .29 .32 | .17 (.07) | -.04 (.02) |
| | Mental health | -1.06 | -2.14 | .14 | 3.47 | | | | |
| | Other-PD | -3.02 | -3.67 | -2.36 | 3.22 | | | | |
| | HPD | -2.01 | -3.36 | -.53 | 2.72 | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Need for Recognition** | Community | -1.72 | -2.01 | -1.40 | 2.08 | 4.25 (3) | .006 (.04) .69 .36 .26 | .004 (.16) | .09* (.02) |
| | Mental health | -1.11 | -1.84 | -.28 | 2.46 | | | | |
| | Other-PD | -.91 | -1.41 | -.40 | 2.41 | | | | |
| | hpd | -.30 | -1.04 | .43 | 1.49 | | | | |

Note. F (DF) = F and degrees of freedom of ANOVA by repeated measures; p (ηp2) = significance and effect of ANOVA by contrast; $p_{contrast}$ ($r_{es}$) = effect and significance of ANOVA by contrast; $\beta_{linear}$ (SE) = betas and standard errors of linear regression. The groups that differed significantly in the Post Hoc were highlighted in gray. $d^1$ = Cohen's d for HPD and community groups comparison; $d^2$ = Cohen's d for HPD and mental health groups comparison; $d^3$ = Cohen's d for HPD and PD groups comparison; * = p < .05 in regression analysis.

The Need for Recognition factor was the only factor with a significant single contribution. This factor demonstrated the greatest capacity to discriminate between groups, particularly between the HPD and community groups. Considering a cutoff > -.87 (equivalent to a raw score equal to eight), the Recognition need factor presented AUC equal to .72, sensitivity equal to .71, and specificity equal to .65 to differentiate the HPD group from the community group.

## Discussion

Investigating discriminative capacity is crucial for determining a measure's usability and establishing a clinically useful cutoff for decision-making. HPD is characterized by pathological traits such as attention-seeking, manipulation, emotional lability, and a strong desire to be the center of attention, which is one of the most defining characteristics of individuals with this diagnosis (Anderson et al., 2014; Hopwood et al., 2012; Krueger et al., 2014; Morey et al., 2016). This study aimed to assess the ability of specific IDCP-2 factors to discriminate people according to the presence of an HPD diagnosis. Based on previous evidence (Abela et al., 2015; Carvalho & Primi, 2015, 2016), we administered five IDCP-2 factors with the potential to discriminate people high in HPD traits. We expected the best performance to be presented by the Need for attention factor. However, our findings indicated otherwise.

Most IDCP-2 factors could identify individuals based on the HPD pathological traits, as individuals diagnosed with HPD exhibited the highest mean scores on these factors. These results align with previous literature indicating which pathological traits are more representative of the presence of HPD (Anderson et al., 2014; Morey et al., 2016; Krueger et al., 2014; Hopwood et al., 2012). The exception to this was the Interpersonal Superficiality factor. Our findings suggested that people without HPD indicators had the highest scores on this factor. The Interpersonal Superficiality factor assesses beliefs about quickly and easily establishing intimate interpersonal bonds (Carvalho et al., 2014). One possible explanation for these findings is that the items measuring this factor may represent socially acceptable behaviors, making them more characteristic of the general population rather than a distinguishing trait of HPD. Similarly, the Emotional Intensity factor did not differentiate the groups. This factor assesses how much the person believes to have more extreme feelings than others and how much the person needs to demonstrate feelings to others (Carvalho et al., 2014). The findings suggest a need to review the items included in this factor.

Intergroup comparisons and regression analyses identified the Need for Recognition factor as the strongest indicator of HPD pathological traits. This factor assesses both the need to be the center of attention and the desire for external validation (Carvalho et al., 2016). Possibly, this was the most discriminating factor because it assesses at the same time two components relevant to the HPD (APA, 2013), the need to be the focus of others and the need to be recognized. This finding explains why the Need for Attention factor demonstrated a lower capacity than this factor, as it measures specifically the need to be in the spotlight (Carvalho et al., 2014). These findings confirm that characteristics

focused on the expectations of others are the most relevant for HPD (Anderson et al., 2014).

We suggest a cutoff equal to eight for administering the IDCP-2 Recognition Need factor for clinical screening purposes of HPD presence. Using this factor would correctly identified 70% of HPD cases and 65% of non-HPD cases. These sensitivity and specificity indicators are considered acceptable for screening tools (Morse & Pilkonis, 2007).

Our study has several methodological limitations that must be weighed when examining our findings. First, the low number of participants diagnosed with personality disorders limits the inferences made based on these results. Second, we did not administer measures other than IDCP-2, which did not allow a direct comparison of the results in the same sample. Furthermore, other pathological traits characterizing HPD, such as impulsivity, were not assessed in this study.

Our preliminary findings suggest that the IDCP-2 factors tested are potentially valid for identifying individuals with HPD traits. Interpersonal Superficiality and Need for Recognition demonstrated the most robust performance among these factors. Specifically, the IDCP-2 Recognition Need factor showed good sensitivity and specificity for initial screenings indicative of possible HPD presence. Despite these promising results, we recommend using all five factors included in our study to provide a comprehensive patient profile. It is important to note that sensitivity and specificity values were derived from a sample consisting of HPD-diagnosed individuals and members of the general population, excluding individuals with other personality disorders (PD). Although the effect sizes were substantial, further research should replicate these findings using larger samples that include individuals diagnosed with other PDs.

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