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Personality Traits on Persistent Depressive Disorder

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Abstract

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Evidence emerged for the HEXACO Model, summarized the domains of personality in six dimensions. The difficulties associated with the diagnosis of dysthymia have raised questions in maintaining in mood disorders. Given the literature review and defending a modification in the structural model of personality, this study proves the importance of a preliminary study of the psychometric properties of HEXACO in a Portuguese sample. It is important the exploration of personality traits in a clinical population diagnosed with Persistent Depressive Disorder. The sample, for the first study, consisted of 118 women and 48 men aged 18 to 57 years (M=26.21, SD=10.23). The study 2 includes participants belonging to the clinical group (M=48.33, SD=10.23) and non-clinical group (M=41.23, SD=9.63) all female aged between 23 and 63 years. The instruments used for the study were the HEXACO-60, NEO-FFI-20 and PHQ-9. The results demonstrate that the HEXACO-60 has satisfactory psychometric properties that make it a suitable tool to evaluate the personality, presenting high correlations with NEO-FFI and a higher internal consistency. It is also verified that there are significant correlations between depressive symptoms and personality traits. Although this analysis is preliminary with regard to psychometric study of the assessment tool HEXACO-60 personality, the statistical analysis of the instrument showed that it has adequate psychometric properties proving to be an appropriate tool to evaluate the constructs of personality. We conclude that there is evidence to suggest the need for reformulation of the diagnosis of persistent depressive disorder.

Keywords: Personality Traits, HEXACO-60, Personality Depressive Disorder.

1. Introduction

Personality appears inherently associated with the notion of person, being understood as a unit and property that exceeds the concrete reality, acting as an organizing centre that addresses the psychological structures (Martins, 2004) reflecting its complexity (Lima & Albuquerque, 2006). Due to this, personality has been the focus of several investigations over the years, it is classified and grouped according to certain characteristics that include or exclude subjects with a pathological diagnosis (Bashiri, Barahmand, Akabri, Ghamari & Vusugi, 2011). The available instruments for studying personality include a range of scales, questionnaires, batteries and inventories, which vary in view of the public it is intended and can be projective or self-report. Several studies show that clinical practice is accompanied mainly by instruments whose aim is to assess the personality (Noronha, 2000; cited by Noronha, Freitas, Sartori & Ottati, 2002) or personality traits in its five dimensions or factors (Blickle, 1996), allowing operate and measure constructs vulnerabilities present in different forms of psychopathology (Ramklint & Ekselius, 2003).

Most researchers agree that personality domains can be summarized in five dimensions known as the model of the Five Factors and through the model of the Big Five Factors: the first is operated in the inventory known as NEO-FFI and NEO-PI -R and the second through IPIP (Ashton & Lee, 2004). This conceptualization has undergone some changes after the incongruities detected when replication studies in different languages had little reliability of Intellect and Honesty dimensions that culminate in the omission of important changes in personality (Ashton & Lee, 2001). Despite the widespread acceptance of the five dimensions, the lexicon of studies in several languages indicated the need to study an additional dimension (Roncero, Fornés & Belloch, 2013), demonstrating evidence for an alternative representation of the structure of personality (Ashton & Lee, 2007). Thus, the Model HEXACO (Ashton & Lee, 2004) arises, being operationalized through HEXACO personality inventory that has six dimensions: 1) Honesty - Humility; 2) Emotionality; 3) Extroversion; 4) Agreeableness vs Rage; 5) Conscientiousness and 6) Openness to Experience (Ashton & Lee, 2009). According to Ashton & Lee (2007) this change in personality structures arises because of (a) the analysis of various studies with respect to their structures verified that even in different languages and cultures prove to be relevant six factors corresponding to those presented by HEXACO; (b) the theoretical discussion of the interpretability of the presented structures either by HEXACO or the model of the Five Factors, and (c) evidence that the model of six factors presented by HEXACO accommodates many important personality constructs that are only briefly encompassed in the Model of the Five Factors.

Replication of HEXACO's psychometric study in several languages showed satisfactory psychometric properties (Roncero, Fornés & Belloch, 2013), and alpha values ranging from .89 in dimension "Conscientiousness" and .92 in dimension "Honesty-Humility" (Roncero, Fornés & Belloch, 2013). These studies allowed us to verify that the structure presented by HEXACO has advantages in its additional dimension, Honesty - Humility, with .46 when analyzed in comparison with the model of the Five Factors through the NEO-PI-R with its corresponding dimension with Agreeableness .26 (Ashton & Lee, 2005, cited by Ashton & Lee, 2008). Additionally, it was found that both the dimensions and the subscales comprising the test had a high internal convergence and a suitable

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convergent validity when analyzed in their areas corresponding to the model of the five factors (Lee and Ashton, 2004, cited by Roncero, Fornés & Belloch, 2013). Furthermore, the authors found that the six dimensions evaluated by HEXACO consistently show higher correlations in various criteria than those presented by the model of the Five Factors related to self-response test and the answer given by an external observer (Ashton & Lee, 2008). In addition, Ashton and Lee (2004), found that the dimensions "Extroversion" and "Conscientiousness" were those that had higher convergent validity r= .86 and r= .83, respectively, and that the dimension with the lower convergent validity was "Openness to Experience" when HEXACO was compared with the IPIP r= .68. This result, alluding to this dimension, can be explained, according to the authors, due to own decision to exclude items related to intelligence perspectives and this is greatly represented in the dimension "Intellect" of IPIP. Still, the psychometric properties of the scales contained in the test showed satisfactory results showing that all scales have high internal consistency levels (Ashton & Lee, 2004).

According to Lima and Albuquerque (2006), the most important assumption of current theories is the study of traits which are defined as functional units of personality and cognitive-dynamic general provisions that direct behavior. Thus, personality traits work as self-regulatory mechanisms that self-sustain, predicting the behavior (Lima, 1997 cited by Lima & Albuquerque, 2006). The authors suggest the traits can be used to summarize, predict and/or explain the conduct of an individual in order to consider the context as an explanation for the behaviour. (Silva & Oliveira, 2011). Thus, personality traits appear as psychological characteristics that are presented as relatively stable trends influencing thoughts, feelings and behaviors as individual interactions product with its context, featuring, however, it is not immutable (Silva & Oliveira, 2007; cited by Silva & Nakano, 2011). For Ramklint and Ekselius (2003), the context in which the child or the adolescent are inserted influences the development of their personality and personality traits, and an early contact with depressive disorders increases the likelihood that affects the development of personality in this sense. According to Martins (2004), emotions emerge as brain activity, resulting in perceptions regarding the context based on the individual's experience. Beck (1964; cited by Beck, 1996) proposed that the activation of certain idiosyncratic cognitive schemes are presented as the main problem in depression having a primary role in the development of various depressive symptoms at a cognitive, affective, and behavioral level. However the author introduces two new concepts: 1) the notion of humor traits is the interconnection sectors of the personality that are designed to handle specific situations and problems, and 2) the notion of cathexes to explain the intensity fluctuations in cognitive structures being applied to sensitivity phenomena, revocation and remission, assisting in the fluctuations between normal or pathological changes in clinical observations of a particular disorder (anxiety, panic or depression). This formulation of the theory of traces of humour arises because of its difficulty in interpreting and grouping various psychological and psychopathological phenomena in the initial model schemes represented by stimulus, cognitive scheme, motivation, emotion and behaviour (Beck, 1996). According to the author, this model allows a comprehensive explanation of complexity, predictability, regularity and uniqueness of normal and pathological reactions.

Depressive disorders hold a common feature: the presence of sadness, emptiness or irritable mood, accompanied by changes either somatic or cognitive affecting clinically significantly the operating

capacity of the subject, differing among the various diagnostic issues related to the duration, timing or ethology (APA, 2014). Among the depressive disorders is the persistent depressive disorder that involves changes in affective, cognitive and neurovegetative functions, manifesting a more chronic form than major depressive disorder (APA, 2014). It is a disorder that due to its early and insidious onset hampers the allocation of symptoms because they become part of the experience of the individual's daily life it's more likely to have co-morbidities with personality and substance use disorders. In the ICD-10 (World Health Organization, 1993), dysthymia is present in the group of persistent disorders of mood (affective) and is considered a chronic depression of mood with the essential diagnostic feature of a very lasting mood depression, which usually begins in early adult life and lasts several years, sometimes indefinitely.

Problem Statement

According to Ryder, Schuller and Bagby (2006) the diagnostic difficulties in the dysthymia are related to issues in an appropriate classification of whether these symptoms should be classified as a diagnosis of a mood or a personality disorder. According to the authors this difficulty arose when introducing the dysthymic disorder on Axis I instead of being included in Axis II. Angst (1998) states that dysthymia is central to the understanding of issues related to psychological disorders and the difficulty in diagnosis is linked with comorbidities that this disturbance is associated with, and the fact of being a disturbance that has an early beginning making it difficult to distinguish between a disturbance of mood or a disorder of Axis II. Some studies have shown the association of depressive personality with specific personality traits, namely: "avoidance of harm" or fear, introversion and self-criticism, high scores in negative emotions (Ryder, Schuller & Bagby, 2006) (neuroticism) and low scores in positive emotions (extrovert), in openness to experience, in the feelings of discouragement (Huprich & Frisch, 2004) and perfectionism (Ryder, Schuller & Bagby, 2006). Brown and Di Nardo (2001) concluded that dysthymia is a disorder that has less reliability at diagnosis, having existed little agreement among health professionals (with $k = .22$ being classified as having little agreement when obtained $k < .40$). In order to increase it's reliability, it was determined that these disorders operate in a continuum rather than be classified in categories or in the presence or absence of symptoms (Di Nardo & Brown, 2001). While these enhancements were important in assigning a correct diagnosis, the difficulty in diagnosing this disorder arises from the fact that there is little reliability in diagnosing categories, as well as unreliability of the criteria that imply a change in the diagnose (Di Nardo & Brown, 2001). Indeed, it was found that the greatest difficulty for the allocation of a correct diagnosis associated with mood disorders are not directly related to differences regarding the definition of symptoms, but with the difficulties of applying a cut-off point that refers to another diagnosis (Brown & Di Nardo, 2001).

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2. Research Questions

Are there statistically significant differences regarding personality traits and depressive symptoms among groups? According to the new concept of personality, that proves the importance of six dimensions, is the HEXACO tool a reliable tool to assess the personality traits of a Portuguese Sample?

3. Purpose of the Study

Considering the literature review and accounting for a modification in the structural model of personality, psychometric preliminary study of the HEXACO in the Portuguese population is considered of great importance. It is also important the exploration of personality traits in a clinical population diagnosed with Persistent Depressive Disorder, using the HEXACO. This study is important because of the difficulties listed above when allocating clinical symptoms associated with the diagnosis of dysthymia.

4. Research methods

To answer the research questions we needed to divide the study in two parts. The first one was to study preliminarily the psychometric properties of the HEXACO tool. In this study, our sample consists of a convenience sample in the Campus of Aveiro's University, in the Oliveira de Azeméis' Nursing School and in the Ria Blades' Enterprise. The exclusion criteria were having symptoms of depressed mood in the last 2 weeks, having been eliminated 15 participants. Inclusion criteria were having an age above 18 years and below 65 years. So the first study had a sample 166 participants with 118 female subjects (71.1%) and 48 men (28.9%) with a mean age of 26.61 (Min = 18; Max = 57, SD = 10:38). With regard to nationality and marital status most are Portuguese (97%) and single (78.3%). With regard to qualifications 59% (n= 98) have higher education, of which 35.5% belong to the nursing program, and 95.2% (n= 158) of them are active, that is, they have a job and/or are students. In this sample, only 3% live alone and 23.5% live with parents and siblings. As for physical health, 57.2% evaluated it as being "good" and 62% evaluated psychological health equally. Concerning depressive symptoms, "over time" 36.7% state that they have experienced depressive symptoms for two weeks or more, having these episodes affected their lives (23.5%). However, 85.5% never mentioned such depressive episodes to a doctor or psychologist (89.2%), and 13.3% take medication due to these depressive symptoms. As regards the age of the first episode depression it is observed a mean age of 22.32 (Min= 9; Max= 48, SD= 9.11), and 15.7% had more than 2 depressive episodes "over time".

As for the study 2, the participants were divided into two groups: clinical and nonclinical group. The first group matches patients who were at the Department of Psychiatry and Mental Health Hospital Infante D. Pedro, in the Ovar's Hospital and District Hospital Águeda (Hospital Baixo Vouga) and a private psychiatric consultation. Under the collaboration with Medicine's Faculty it was also possible to integrate dysthymic patients who presented in Coimbra's Hospital. The non-clinical group consisted of a selection of the sample of the first study, paired with the clinical sample by socio-demographic

characteristics. The non-clinical group consisted of a selection paired with the clinical sample by socio-demographic characteristics. Inclusion criteria in the clinical group were: 1) a diagnosis carried out by the reference psychiatrist of persistent depressive disorder; and 2) have depressive symptoms for more than 2 years. Exclusion criteria: 1) patients with dual diagnosis; 2) patients whose depressive symptoms lasted for less than 2 years; 3) being male and 4) patients below 18 and above 65 years old. Given these criteria, nine participants of clinical group were excluded because two of them were older than 65, other two did not have time to complete the whole questionnaire, four were male and one had a diagnosis of mood disorder associated with a general medical condition. Thus, the clinical group, had a sample of 30 participants all female with an average age of 48.33 (Min=24, Max=63, SD=10.23). With regard to nationality and marital status, all participants in this sample are Portuguese and 66.7% are married. With regard to qualifications 26.7% (n= 8) have basic education, 16.7% secondary education and 20% higher education of which 16.7% belong to education course, and 56.7% (n= 17) of them are active, that is, they are employed and/or are students. In this sample, only 3.3% live alone, 33.3% live with their partner/husband and 33.3% live with their husband and children. With regard to physical health, 43.3% assessed it as "either good or bad" and 50% assessed their psychological health as "bad". With regard to depressive symptoms, "over time" 93.3% state that have experienced depressive symptoms for two weeks or more, with these episodes affecting their lives (90%). Only 10% never mentioned these depressive episodes to a doctor, 73.3% never mentioned these episodes to a psychologist, and 93.3% took medication due to this depressive symptomatology. As for the age of the first depressive episode is observed a mean age of 30.19 (Min=16, Max=56, SD=12.21), and 56.7% had more than 2 depressive episodes "over time".

Participants belonging to the non-clinical claim not to have the diagnosis of persistent depressive disorder. Regarding the non-clinical group, ten participants were excluded because: nine of them had not completed the whole questionnaire and one of them had not used properly the response options presented, which invalidated the answers given. Thus, this group, had a sample of 30 participants all female with an average age of 41.23 (Min=23, Max=55, SD=9.63). With regard to nationality and marital status most of the participants are Portuguese (96.3%) and married (53.3%). As for qualifications 33.3% (n= 10) have basic education, 10% post-secondary education and 26.7% higher education of which 16.7% belong to a psychology course, and 83.3% (n=25) of them are active, that is, they are employed and/or are students. In this sample, only 3% is living alone and 43.3% live with their husband and children. With regard to physical health, 56.7% evaluated it as being "good" and 50% evaluated psychological health equally. With regard to depressive symptoms, "over time" 60% state that they have experienced depressive symptoms for two weeks or more, with these episodes affecting their lives (50%). However, 66.7% never mentioned such depressive episodes to a doctor or psychologist (80%), and 33.3% take medication due to these depressive symptoms. Regarding the age of the first depressive episode it is observed a mean age of 30.44 (Min=14; Max=48, SD=11.60), while 40% had more than 2 depressive episodes "over time".

The present study had the participation of 196 people divided in two groups: 30 participants belonging to the clinical group and the other 166 participants corresponding to the first study, having been collected in this sample 30 subjects who were matched with subjects in study 2. All participants

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voluntarily answered a questionnaire of socio-demographic and clinical characterization, and the following assessment tools: a) the Portuguese version of HEXACO-60 studied in this work (HEXACO - 60 Lee & Ashton, 2004) b) PHQ-9, Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer & Williams, 2001; Portuguese version: Torres Pereira, Monteiro & Albuquerque, 2013) c) NEO-FFI, called NEO Five - Factor Inventory (NEO-FFI; Costa & McCrae, 2004; Portuguese version: Bertoquini & Pais Ribeiro, 2005). The questionnaire of socio-demographic and clinical characterization allowed to collect data on age, education, marital status, employment status, nationality and helped with the characterization and identification of depressive symptoms. This questionnaire contained aspects that are covered by the informed consent, in particular those related to confidentiality and anonymity of the given answers.

5. Findings

5.1 Factor analysis

Factor analysis was studied in 60 items and used for the varimax rotation. The KMO test has shown that the sample was appropriate to carry out a proper analysis (KMO= .65> .50); however, when evaluated individually some of the items go against this assumption. An analysis was also carried out to verify the components present in this instrument; the result is that nineteen factors had eigenvalues greater than 1 corresponding to the criteria proposed by Kaiser, and together, these factors explain 68.78% of the variance. From those nineteen factors ten of them were found given the maximum values found for each item corresponding to each factor; however, we chose to analyse the dimensions of personality and its subscales in view of the elongated version of the instrument (HEXACO- PI-R), likewise the original study of Ashton and Lee (2009). The item 30 of the instrument showed loadings with values below the cut-off point used (.30) in all the factors found, so it is suggested that this question should be eliminated.

5.2. Internal consistency

The instrument shows appropriate values of Cronbach's alpha, with α= .79, demonstrating good values of internal consistency. With regard to its subscales, lower values of alpha were found (with α<.70), but in respect of the six dimensions evaluated by HEXACO the alpha values ranging from .68 to .82. In the original study of the scale, the alpha values for the dimensions ranged from .73 to .80 for the community sample. Regarding the internal consistency of the NEO-FFI-20 this shows values less suitable in the samples studied, with α= .64, with the five dimensions analysed values ranging from .63 to .81. PHQ9 already has adequate fidelity values with α = .88.

5.3. HEXACO-60 correlated with the NEO-FFI-20

Table 1 shows the correlation between the dimensions of HEXACO-60 with dimensions of NEO-FFI-20. Correlations with higher values between HEXACO - 60 and NEO-FFI-20 were observed between the dimensions "Extroversion" (r = .56), "Conscientiousness" (r= .57) and "Openness to Experience" (r= .75) corresponding to each instrument. Some significant negative correlations between

the scales "Humility - Honesty" and "Extroversion" of HEXACO and "Neuroticism" NEO-FFI can also be seen.

Table 1. Pearson's correlation between HEXACO-60 and NEO-FFI-20.

Dimensions of HEXACO - 60	Dimensons do NEO-FFI-20				
	Neuroticism	Extroversion	Openness to Experience	Agreeableness	Conscientiousness
Humility-Honesty	r= -.150*	r= .008	r= .021	r= .266**	r= .202*
Emotionality	r= .097	r= .080	r= .060	r= .406**	r= .089
Extroversion	r= -.541**	r= .557**	r= .182	r= .271**	r= .378**
Agreeableness	r= -.179	r= .016	r= .052	r= .341**	r= -.006
Conscientiousness	r= -.119	r= .206*	r= .281**	r= .226*	r= .572**
Openness to Experience	r= -.114	r= .324**	r= .745**	r= .215*	r= .299**

*r: Pearson's correlation, **p<.001,* p<.05

5.4. Correlation of the PHQ-9 with HEXACO-60

Table 2 shows the correlations between the dimensions of HEXACO-60 with symptoms of depressed mood of the PHQ-9. There are significant negative correlations between dimensions "Extroversion" and "Openness to Experience", and between the subscales: "Social Self Esteem", "Vivacity", "Patience", "Assessment Aesthetics," "Unconventional" and "Curiosity" from HEXACO-60 and depressive symptoms of the PHQ-9. Apart from these, the PHQ-9 has a significant positive correlation with the subscale "Dependency" of HEXACO -60 (Table 2).

Table 2. Pearson's correlation of the PHQ-9 with HEXACO-60.

Dimensions and Subscales of HEXACO - 60	PHQ-9
Dimension Extroversion	r= -.50**
Dimension Openness to Experience	r= -.32**
Subescale Dependency	r= .38*
Subescale Social Self Esteem	r= -.49**
Subescale Vivacity	r= -.59**
Subescale Patience	r= -.43**
Subescale Assessment Aesthetics	r= -.33***
Subescale Curiosity	r= -.28*
Subescale Unconvencional	r= -.37*

r: Pearson's correlation*,* *p<.05, ***p<.001,***p<.01*

5.5. Correlation of the PHQ-9 with the NEO-FFI-20

Table 3 shows the correlations between the dimensions of the NEO-FFI-20 with symptoms of depressed mood of the PHQ-9. We can observe in table 3 significant correlations between depressive symptoms assessed by PHQ-9 and the dimensions of NEO-FFI-20: a negative correlation with the dimension "Extroversion" and a positive one with the dimension "Neuroticism" (Table 3).

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Table 3. Pearson's correlation of the PHQ-9 with the NEO-FFI-20.

Dimensions do NEO-FFI-20	PHQ-9
Dimension Extroversion	r= -.43*
Dimension Neuroticism	r= .62*

r: Pearson's correlation*, *p<.001*

5.6. T-Test: Independent Samples Study in PHQ9

To analyse personality traits present in patients with persistent depressive disorder we applied t-test at PHQ9 and it was found that there is a statistically significant difference for the presence of depressive symptoms between the two study groups with an average of 5.80 for the non-clinical group and M= 13:33 for the clinical group (t (58)= -4987, p <.001). It is observed that the two study groups (clinical and non-clinical) differ therefore from each other with respect to depressive symptomatology, with clinical group present a significantly higher mean depressive symptomatology (table 4).

Table 4. Descriptive Statistics between groups

PHQ9	N	M	SD	t
Non – Clinical	30	5.80	4.985	-4.99*
Clinical	30	13.33	6.604	

*N:sampe size, M: mean, SD: Standard Deviation; t: t - test; *p<.001*

5.7. T-Test: Independent Samples Study in HEXACO-60

The analysis of the personality traits assessed by HEXACO-60 was also performed by a t-test for independent samples, which allowed us to observe that there are some significant differences regarding the two study groups with a mean of 7.60 for the nonclinical group and M= 6.03 for the clinical group in the subscale "Anxiety" (t(58)= 4.215, p<.001). Regarding the dimension "Extroversion", we observe similarly, statistically significant differences with a mean of 32.93 for the non-patients and M= 28.60 for clinical group (t(58)= 3.151, p<. 005). The analysis has also verified significant differences in the subscales: "Social Self-Esteem" (t(58) = 3.673, p<.001) with a mean of 10.77 for the non-clinical group and M= 8.87 for the clinical group; "Vivacity" (t(58)= 4.285, p<.001) with a mean of 6.57 for the non – clinical group and M= 4.73 for the clinical group; "Patience" (t(58)= 4.643, p<.001) with M= 8.43 for the non-clinical group and M= 6.37 for the clinical group; and "Flexibility" (t(58 = -5.168, p<.001) with M= 6.53 for the non-clinical group and M= 9.27 for the clinical group HEXACO-60 (Table 5).

It is observed that the two study groups (clinical and non-clinical) differ, therefore, from each other with respect to personality traits, dimensions and subscales mentioned above, with the clinical group presenting significantly lower scores than the nonclinical group except when analysing the subscale "Flexibility" featuring a significantly higher mean. In the other subscales and dimensions evaluated, statistically significant differences between the groups for personality traits were not found.

Table 5. Descriptive statistics of groups (HEXACO-60)

Personality Traits	Non - Clinical		Clinical		t
HEXACO	M	SD	M	SD	
Dimension Extroversion	32.93	5.533	28.60	5.110	3.151**
Subescale Ansiety	7.60	1.714	6.03	1.098	4.215*
Subescale Social Self Esteem	10.77	1.995	8.87	2.013	3.673*
Subescale Vivacity	6.57	1.832	4.73	1.461	4.285*
Subescale Patience	8.43	1.813	6.37	1.629	4.643*
Subescale Flexibility	6.53	2.080	9.27	2.016	-5.168*

*M: mean, SD: Standard Deviation; t: t-test; *p<.001; **p<.05*

5.8. T-Test: Independent Samples Study on NEO-FFI-20

A t-test was used for independent samples to analyse personality traits of the instrument NEO-FFI-20, which observed some statistically significant differences with respect to the two study groups. The statistically differences were found on the dimensions "Neuroticism" with a mean of 6.53 for the non-clinical group and M= 10.03 for the clinical group (t(58)= -4.322; p<.001) and "Conscientiousness" with M= 9.27 for the non-clinical group and M= 11.63 for clinical group (t(58) = -3.540; p<.001) relative to the NEO-FFI-20 (table 6). The independent variable is the group (Clinical vs. Non-Clinical), while the dependent variables match the dimensions and subscales of NEO-FFI-20.

It is observed that the two study groups (clinical and non-clinical) differ from each other with regard to personality traits, in the dimensions mentioned above, with the clinical group presenting a significantly higher mean than the non clinical group. In the other subscales and dimensions evaluated statistically, significant differences between the groups for personality traits were not found.

Table 6. Descriptive statistics of groups (NEO-FFI-20)

Personality Traits	Non - Clinical		Clínical		t	Sig.
	M	SD	M	SD		
NEO-FFI						
Dimension Neuroticism	6.53	3.627	10.03	2.553	-4.322	p<.001
Dimension Conscientiosness	9.27	3.362	11.63	1.450	-3.540	p<.001

M: mean, SD: Standard Deviation; t t-teste

6. Conclusions

Despite the fact that this analysis is still very preliminary with regard to psychometric study of the assessment tool HEXACO-60, the statistical analysis of the instrument showed that it has adequate psychometric properties proving to be an appropriate tool to evaluate the constructs of personality. Although its subscales have lower values of alpha .70, it is necessary to take into account the instrument, in the case of assessment tools of personality lower values are expected since it analyses a complex constructs of dimension (Field, 2013). In addition, the total number of items to be analysed influence the alpha value, and higher alpha values correspond to a larger number of items, which enables a high internal consistency value not due to their fidelity, but due to the large number of

analysed items (Field, 2013), so it should be appreciated that the subscales evaluate only 2 to 3 items each. Internal consistency was higher than the personality test NEO-FFI-20 that had alpha values lower than .70 in all its dimensions, except in the dimension "Conscientiousness" with α= .81. The factorial analysis of the instrument meets the English version and found ten factors; however, when analysed individually not all had loadings greater than .30. Since the item 30 has not scored in any of the factors, we do question the relevance of this item and its maintenance in the instrument in study. Despite this and since the analysis of the internal consistency showed satisfactory values, we decided to not eliminate any item.

The correlation of the six HEXACO-60 dimensions with the five dimensions presented by the NEO-FFI-20 were expected and the results are consistent with those found in the English version (Ashton & Lee, 2009), verifying higher positive correlations with the corresponding domains "Extraversion", "Conscientiousness" and "Openness to the Experience" of each instrument, and verifying significant correlations between all domains from NEO-FFI-20 and HEXACO-60. These results demonstrate that HEXACO-60 has the ability to evaluate the personality dimensions assessed by NEO-FFI-20, showing to be a more accurate tool in its evaluation. The performed statistical analysis showed satisfactory psychometric properties of HEXACO and has shown that the new structural model of personality has advantages in its additional dimension, "Honesty - Humility" with .75 when analyzed in comparison with the model of the five factors through NEO-FFI-20 with its corresponding dimension "Agreeableness" with .65, which can also be verified in the study of the English version. Additionally, it was found that both the dimensions and the subscales comprising the test had a high internal convergence and a suitable convergence when analysed in their areas corresponding to the model of the five factors.

Once we analysed the structure and the psychometric properties of HEXACO-60, we decided to analyse the personality traits between an undiagnosed group and a group diagnosed with persistent depressive disorder to see if there were differences in personality traits between the two groups. After confirming the presence of most significant depressive symptoms among the patients diagnosed with Depressive Disorder Persisting through the assessment instrument PHQ-9, which confirms the hypothesis that there are significant differences in the symptoms of depressed mood of the participants from the different groups, we analysed the correlation between symptoms of depressive mood measured by PHQ-9 and personality traits assessed by HEXACO-60. In this analysis, we found that higher levels of depressive mood symptoms are associated to personality traits more marked for "dependence" and that lower levels of depressive symptomatology are associated to personality traits less marked in the following traits: "Openness to Experience" and "Extroversion" and the subscales "Social Self Esteem", "Vivacity", "Patience", "Assessment Aesthetics" "Unconventional" and "Curiosity". When we analysed the correlation between depressive symptoms and personality traits assessed by the NEO-FFI-20 it appears that at higher levels of depressive symptoms personality traits more marked for "Neuroticism" are associated and lower levels of depressive symptoms correspond the personality traits less marked in the dimension "Extroversion" NEO-FFI-20. These data were expected because of the study of Ryder, Shuller and Bagby (2006), which determine that the specific traits associated with personality symptoms of depressed mood are low scores on extraversion, perfectionism,

feelings of discouragement, openness to experience and high scores symptoms of depressed mood in neuroticism and fear.

Similarly, statistically significant differences between the clinical group and the non-clinical group in five subscales and a dimension of HEXACO-60 and two equivalents dimensions of NEO-FFI-20 were checked. An explanation for this result may be the fact that there is evidence that the model of the six factors presented by HEXACO accommodates many important personality constructs that are only briefly encompassed in the Model of the Five Factors (Ashton & Lee, 2009). These results demonstrate that patients with Depressive Persistent Disorder have significantly lower scores in the dimension "extroversion" and subscales: "Anxiety," "Social Self Esteem", "Vivacity" and "Solitaire" from the HEXACO and significantly higher scores for the dimensions "Neuroticism" and "Conscientiousness" from the NEO-FFI-20 and subscale "Flexibility" of HEXACO-60. These results indicate that these patients are less extroverted, are less anxious, have a lower social self-esteem, have less vitality, are less patient and quite the contrary they are more neurotic, more careful and meticulous and more flexible than the subjects who do not have this diagnosis. These data go into the same direction as those reported in the literature by authors Huprich and Frisch (2004), which determines that the Depressive Personality Disorder corresponds to low scores of self-esteem, feelings of discouragement, sadness and unhappiness and high scores of neuroticism corresponding to negative affect and anxiety. In this analysis, the only result that is against the literature is the fact that patients with Persistent Depressive Disorder have significantly lower scores regarding the subscale "Anxiety". However, an appropriate explanation for this score maybe that these patients believe, regardless of their efforts, they have little chance of success, not being able to generate alternative solutions when negative outcomes (Huprich & Frich, 2004). This interpretation of their own success makes them avoid new situations that could put into question their ability to succeed, thus decreasing their anxiety compared to the nonclinical group, which accepts new challenges regardless the increase of their anxiety. However, further studies should include in their analysis this variable (expectation of success), to check this possible interpretation.

This study supports the arguments of authors like Angst (1996), Huprich and Frisch (2004) and Ryder and colleagues (2006), since they argue that the Persistent Depressive Disorder or dysthymia should be a diagnostic of Personality Disorders. So, given the results, the depressive personality, in this study, is characterized by high scores in neuroticism, conscientiousness and flexibility and low scores in extraversion, anxiety, social self-esteem, vivacity and patience. This study contributes, although preliminary, with the assertion of a valid tool for assessing personality, which is presented as a valuable contribution to the range of instruments available and to support the validity of the model of the six factors in the study of personality. Similarly, this study provides: 1) a description of personality traits in persistent depressive disorder, 2) the acceptance of a change in the diagnosis of Persistent Depressive Disorder framing it in Personality Disorders, 3) a review, diagnosis and clinical intervention of dysthymia to be rethought, given the connection of personality traits that seem to be related to the symptoms and 4) the review of the form of the diagnosis of persistent depressive disorder classification as a contribution to the improvement of intervention in this symptomatology, with the adoption of interventions more aimed at easing the personality traits.

Future studies, besides the ones already mentioned above, should increase the sample size of the clinical study population (in this study was only n= 30) and should use more robust inferential statistics such as MANOVA. Although we know that the use of the t-test may be a limitation in this study, and that the use of MANOVA would be more appropriate, we also know that the fact the assumptions are clearly defined at the outset, may reduce the risks associated with various analyses of t-test performed.

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