Potential Therapeutic Targets in People with Emotional Dependency

Objetivos terapéuticos potenciales en personas con dependencia emocional

Mariantonia Lemos¹,*, Andrés Miguel Vásquez¹ and Juan Pablo Román-Calderón¹

Abstract
Objective: To examine the relationship between the components of emotional dependency (ED) with anxious, depressive, and impulsive symptomatology. Method: 98 university students (68% women, age M = 20.2 years, ED = 2.19) responded to the ED Questionnaire (EDQ) (Lemos & Londoño, 2006), the Beck Depression Inventory II (Beck, Steer, & Brown, 2011), the Beck Anxiety Inventory (Beck & Steer, 2011), and the short version of the Barratt Impulsiveness Scale BIS-15S (Spinella, 2007). Results: The structural model indicated that a fear of being alone is associated with separation anxiety, which in turn gives rise to plan modification (PM), search for emotional expression (SEE) and attention-seeking (AS). We found that PM was associated with depression, SEE with anxiety, and that impulsivity could lead to AS. Conclusion: These results identify potential therapeutic targets in people with ED.

Resumen
Objetivo: Examinar la relación entre los componentes de la dependencia emocional (DE) con sintomatología ansiosa, depresiva e impulsiva. Método: 98 estudiantes universitarios (68% mujeres, edad M = 20.2 años, DE = 2.19) respondieron el Cuestionario de DE (CDE) (Lemos & Londoño, 2006), el inventario de depresión de Beck II (Beck, Steer, & Brown, 2011) y el de ansiedad (Beck & Steer, 2011) y la escala de impulsividad de Barratt en su versión reducida BIS-15S (Spinella, 2007). Resultados: el modelo estructural señaló que el miedo a la soledad se asocia con la ansiedad de separación, de la que se despliegan las estrategias de modificación de planes (MP), búsqueda de expresión afectiva (BEA) y búsqueda de atención (BA). Se observó asociación de MP con depresión, de BEA con ansiedad, y que la impulsividad podría llevar a la BA. Conclusión: Estos resultados señalan blancos terapéuticos en personas con DE.

Keywords: Dependency, Anxiety, Depression, Impulsivity, Structural Equation Models.

Palabras Claves: dependencia, ansiedad, depresión, impulsividad, modelos de ecuaciones estructurales.

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Introduction

Emotional dependency (ED) refers to a chronic pattern of unmet affective demands, which individuals desperately seek to meet through close interpersonal relationships (Castelló, 2002, 2005). This has been seen as genuine relational dependency; that is, not one that is mediated by other affective disorders (Sirvent, 2000), in which the difference established between an individual with this pattern of illness and an individual with healthy affect patterns are purely quantitative (Lemos & Londoño, 2006). It is worth noting that other authors have written about love addiction (Schaeffer, 1998), interpersonal dependency (Hirschfeld et al., 1977) or emotional dependency in a marital relationship (Rathus & O’Leary, 1997), among others. However, in recent years, the use of the ED construct has been consolidated to refer to a personality trait or pattern of excessive dependency on others (Urbiola, Estévez, & Iraurgi, 2014).
ED involves cognitive, emotional, motivational, and behavioral components which are associated with each other and reflect the beliefs of subjects and their strategies to cope with the unease produced by possible abandonment by and control over the partner (Jaller & Lemos, 2009; Urbiola et al., 2014). According to Lemos & Londoño (2006), beliefs are associated with a fear of being alone and separation anxiety, and the strategies used include plan modification, a need for emotional expression, attention-seeking, and borderline behavior in a case of imminent abandonment. It is worth noting that similar components have been described in other studies such as those by Urbiola et al. (2014) who showed that ED in a relationship is characterized by an avoidance of being alone, the need for exclusivity, people-pleasing behavior, and an asymmetric relationship. Villa Moral Jiménez and Sirvent Ruiz (2009) state that the behavior of an individual with ED is similar to that of an individual with substance dependence, revealing an irresistible longing to be with the person who is the object of dependence, a compulsive need for his or her presence, and negative reactions in his or her absence. These factors would lead the individual to accommodate to the partner’s wishes, suffer an emotional void, present no awareness of the problem, and feel bound to the relationship.

With respect to prevalence, a literature review carried out in 2016 indicated that figures between 5% and 24.5% have been reported, and that ED is a very important problem given its association with different profiles, in particular, gender-based violence (Bution & Wechsler, 2016). In this respect, the results of the studies indicate that emotional dependency would be associated with suicidal ideation in university students (Siabato & Salamanca, 2015), partner violence (Del Castillo, Hernández, Romero & Iglesias, 2015; de la Villa, García, Cueto & Sirvent, 2017; Loinaz & Echeburúa, 2012; Álvarez-Dardet, Pérez-Padilla, & Lorence-Lara, 2013; Preciado-Gavidia, Torres-Cendales, & Rey-Anacona, 2012; Urbiola, Estévez, Iruarrizaga, & Jauregui, 2017), depressive and depression symptomatology (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004; Urbiola et al., 2017), anxiety symptoms (Urbiola et al., 2017), personality disorders (Bornstein, 1998; Morse, Robins, & Gittes-Fox, 2002), and Internet and cell phone addiction (Estévez, Urbiola, Iruarrizaga, Onaindia, & Jauregui, 2017), among other psychopathological profiles (Santamaría et al., 2015).

It is important to point out that a more detailed analysis of psychopathological profiles and problem behaviors associated to ED would point to common underlying factors. A number of studies have shown that significant anxiety or depressive symptomatology underlies addictive behaviors such as Internet and cell phone addiction (Ballarotto, Volpi, Marzilli, & Tambelli, 2018; Caplan, 2007; Ho et al., 2014; Poorakbaran, 2015; Reed et al., 2017; Wiener et al., 2018), and it has been found that partner violence has associated emotional factors and components of impulsivity (Ahmadzad-Asl, Davoudi, Zarei, Mohammad-Sadeghi, & Rasoulian, 2016; Lewis et al., 2017; Shaikh, Pearce, & Yount, 2017). Finally, it has been reported that suicidal behavior may be preceded to a great extent by depression, anxiety, or impulsivity (Najafi, Mamazandi, & Balubang, 2017; Palmier-Claus, Taylor, Varese, & Pratt, 2012).

With respect to the latter three factors, Estévez et al. (2017) reported that in Spanish university students, depression and anxiety are associated with an avoidance of being alone, while asymmetric relationships tend to be associated with depressive symptomatology. In another study by Urbiola et al. (2017) involving a Spanish population, the authors reported that avoidance of being alone is the only component of ED which is associated with anxiety. Yet another sample of Spanish teenagers surveyed using the Emotional Dependency in Dating Relationships Questionnaire (Estévez et al., 2018) revealed that impulsivity is associated with ED and all of its components.

In sum, research on ED indicates the existence of some basic related characteristics; however, the relationship between the components (beliefs and strategies) has been hypothesized but not verified experimentally. Most of the studies that have associated ED with psychopathology or problem behavior have done so in a general manner and not through its components, except the studies mentioned above involving Spanish populations. The above is considered relevant from a perspective of clinical psychology, as an identification of the beliefs, threats, or behavioral strategies would guide psychotherapy more effectively towards changing the patient’s beliefs or behaviors (Clark & Beck, 2010). As such, this study responds to the need to examine the relationship between the components of ED and their association with impulsivity, anxiety, and symptoms of depression. Clarifying these relationships allows us to understand the profile in order to identify potential therapeutic targets for patients with ED.

**Method**

**Design**

This is a quantitative, cross-sectional, descriptive and correlational study. It is descriptive inasmuch as it specifies the characteristics and profiles of people, groups or communities; and correlational in that it points to the association between two or more variables in one context (Hernández, Fernández & Baptista, 2006).
Population and sample
The reference population was made up of university students from four private universities in Medellín. The inclusion criteria were as follows: to be of legal age and to have signed the informed consent form. Students with cognitive, neurological, psychiatric, or motor impairment that hindered response capacity to psychological tests were excluded. The sampling was purposive, seeking to include similar proportions of students from each of the universities. The sample included 98 university students, 68% women (n = 67), with an average age of 20.2 years (D.T. = 2.19) and an age range of 18 to 29. Some 46% of the sample was in a relationship at the time of assessment.

Assessment instruments
Emotional Dependency Questionnaire – EDQ (Lemos & Londoño, 2006). This questionnaire was created to evaluate ED measured by its six components. It is a 23-item scale with appropriate reliability (α = 0.93 for the total scale, a between 0.62 and 0.87 for the subscales) and validity levels in the university population. A subsequent confirmatory factorial analysis corroborated that the scales for separation anxiety, emotional expression from the partner, plan modification, fear of being alone, and attention seeking have an average extracted variance of above 53% and a composite reliability of above 0.75. It was also found that the EDQ presented a strong degree of metric invariance between sexes and whether a partner was present or not (Lemos, Vásquez-Villegas & Román-Calderón, 2019). The Cronbach’s alpha for the scale in this study was of 0.92.

Beck Depression Inventory, second edition, Spanish version – BDI-II (Beck, Steer, & Brown, 2011). This is a 21-item self-administered questionnaire that assesses the severity of depressive symptomatology in adults and teenagers. It is an updated version of the first edition (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) that contains current criteria for the diagnosis of depression (Beck et al., 2011). The reliability indices of the original version (0.92) and the Spanish version (between 0.87 and 0.91) are appropriate. The factorial analyses in both validations revealed the existence of two main factors that explain the greatest proportion of the variance and are related to the somatic and cognitive symptomatology of depression (Beck et al., 2011; Sanz, García-Vera, Espinosa, Fortún, & Vázquez, 2005; Sanz, Navarro, & Vázquez, 2003; Sanz, Perdigón, & Vázquez, 2003). The reliability index obtained for the BDI-II for the sample was of 0.88.

Beck Anxiety Inventory – BAI, Spanish version (Beck & Steer, 2011). This is a self-administered questionnaire for anxiety symptoms and their severity in adults and teenagers. The original validation presents a high level of internal consistency (α = 0.92), and the test-retest applied one week apart showed a correlation of 0.75. For concurrent and divergent validity, Beck and Steer (2011) reported correlations with different anxiety and depression tests: 0.51 with the Hamilton Anxiety Scale, 0.48 with the Beck Depression Inventory, and 0.47 and 0.58 with the subscales of state anxiety and trait anxiety, respectively, from the State-Trait Anxiety Inventory (STAI). The Spanish validation also presented appropriate internal consistency indices (between 0.85 and 0.93) (Sanz & Navarro, 2003). A Cronbach’s alpha of 0.91 was obtained for this study.

Barrat Impulsivity Scale –BIS (Patton, Stanford, & Barratt, 1995) in its short version –BIS-15S (Spinella, 2007) and validated in a Colombian population (Orozco-Cabal, Rodríguez, Herin, Gempeler, & Uribe, 2010). This is a 15-item self-administered questionnaire based on a Likert scale of 1 (rarely or never) to 4 (always or almost always). The test was translated into Spanish by Oquendo et al. (2001), who analyzed the main components and selected the five items with the highest loads. The internal consistency index for the original version was 0.81 and in the Colombian version, it was 0.79. The reliability index in the assessed sample was of 0.80.

Procedure
In each university, participants were invited directly and individually by a research assistant who explained the study objectives to the potential candidates. Those who accepted signed the informed consent form and were subsequently given the assessment protocol to fill out. This study complied with all of the ethical standards for research involving human beings.

Statistical analysis
The PLS structural equation modeling (PLS-SEM) was chosen given the presence of latent variables in the specified model and the sample’s relatively small size. The possibility to analyze complex models using small samples is one of the advantages of PLS-SEM when compared to covariance-based SEM. In PLS-SEM, the minimum sample size is calculated according to the number of directed arrows going into the latent variables within the specified model, the statistical power, and a minimum value of explained variance with its corresponding statistical significance (Hair, Hult, Ringle, & Sarstedt, 2017). In this study, a model consisting of seven parameters of this type was analyzed. With a statistical power of 80% (commonly used statistical power), and a minimum explained variance of 0.25 p > 0.01 (considered weak as indicated below), the sample gathered had to be greater than 69 observations. The authors of the study analyzed the data corresponding to 98 observations. The measurement scale was evaluated first. The reliability of the scales was evaluated using Cronbach’s alpha coefficients (α)
and the coefficient of composite reliability (CR), and the rule of thumb for both coefficients was ≥0.70 (Nunnally & Bernstein, 1994). These two coefficients are used in PLS-SEM to assess this psychometric property (Hair, Ringle, & Sarstedt, 2011). The collinearity of the items was assessed using the Variance Inflation Factor (VIF) coefficients; values equal to or greater than 0.50 indicate collinearity and, as such, problems in model estimation (Hair et al., 2011). To account for evidence with respect to the convergent validity that would be part of the validity of the tests in relation to other variables, we examined the factorial loads and used the Average Variance Extracted (AVE) coefficient. Factorial loads with values greater than 0.60 and AVE greater than 0.50 reveal convergent validity for the constructs analyzed (Hair et al., 2017). The Heterotrait-Monotrait Ratio of Correlations (HTMT) coefficient was considered in order to calculate the discriminant validity of the constructs. Values of less than 0.90 for this coefficient indicate that the constructs are subject to discriminant validity (Hair et al., 2017). The authors subsequently calculated the structural model, assessing construct collinearity using VIF and the same critical values mentioned above (Hair et al., 2011). They then used bootstrapping to calculate the significance of the sequences specified in the model.

Instead of assessing the general goodness of fit through a series of coefficients, as used in covariance-based SEM models, in PLS-SEM the structural model is evaluated according to its predictive accuracy (Hair et al., 2017), assessed by evaluating the magnitude of the explained variance (R2) of each of the endogenous variables. R2 values of 0.75, 0.50, or 0.25 are considered substantial, moderate, and weak respectively (Hair et al., 2011). To evaluate the size of the effect of the constructs, we used the f2 coefficient. Values of 0.02, 0.15, and 0.35 represent small, medium, and substantial effect sizes, respectively (Cohen, 1988). As well as R2, the Stone-Geisser (Q2) value was examined to establish the model’s predictive accuracy. Values greater than zero for the endogenous variables are indicative of the model’s predictive power. Smart PLS (v 3.2.7) was used for all analyses (Ringle, Wende, & Bender, 2015).

### Results

The measurement model presented satisfactory results and the scales showed good reliability indices. There were no problems of collinearity in relation to the items (VIF < 0.50), and the constructs passed the convergent validity test (Table 1).

### Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>α</th>
<th>CFC</th>
<th>AVE</th>
<th>R²</th>
<th>Q²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation Anxiety</td>
<td>0.88</td>
<td>0.9</td>
<td>0.59</td>
<td>0.31</td>
<td>0.16</td>
</tr>
<tr>
<td>Motor Impulsivity</td>
<td>0.77</td>
<td>0.83</td>
<td>0.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Modification</td>
<td>0.82</td>
<td>0.88</td>
<td>0.65</td>
<td>0.33</td>
<td>0.2</td>
</tr>
<tr>
<td>Emotional Expression</td>
<td>0.89</td>
<td>0.92</td>
<td>0.74</td>
<td>0.6</td>
<td>0.51</td>
</tr>
<tr>
<td>Attention Seeking</td>
<td>0.71</td>
<td>0.87</td>
<td>0.77</td>
<td>0.31</td>
<td>0.19</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.9</td>
<td>0.91</td>
<td>0.47</td>
<td>0.13</td>
<td>0.04</td>
</tr>
<tr>
<td>Depression</td>
<td>0.86</td>
<td>0.88</td>
<td>0.52</td>
<td>0.07</td>
<td>0.02</td>
</tr>
<tr>
<td>Fear of Solitude</td>
<td>0.83</td>
<td>0.89</td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All the constructs showed convergent validity, as all the HTMT coefficients fell below the critical value. Some of the items were eliminated given their low factorial loads. The items of the borderline expression factor did not reach the expected value and so were eliminated from the model. The items and factors that were kept are shown in Figure 1.

There were no collinearity problems for the constructs. All of the sequences specified in the model shown in Figure 1 were statistically significant (Table 2). The explained variances were weak to moderate in the case of depression (Figure 1). Three of the factors analyzed were small and the others reached moderate and substantial sizes (see Table 2). The values (Q2) indicate the predictive accuracy of the model (Table 1). As a result, the authors decided to keep the model in Figure 1.
Discussion

This study analyzed the relationship between the components of ED with symptoms of anxiety, depression, and impulsivity. The results show that fear of being alone is associated with separation anxiety, which leads to plan modification, the need for emotional expression and attention-seeking behavior. Plan modification is associated with depression; emotional expression with anxiety; and impulsivity as a trait is associated with attention-seeking behavior.

The relationship between fear of being alone and separation anxiety can be explained through development theories, as children develop attention-seeking behaviors and clinging as part of the restoration of attachment when they feel lonely (Grossmann, Grossmann, Kindler, & Zimmermann, 2008; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).
This was considered by Izquierdo and Gómez-Acosta (2013) in their review of dependency from a contextual perspective. In this respect, studies reveal the existence of a relationship between ED and attachment (Alonso-Arbiol, Shaver, & Yarnoz, 2002; Loinaz & Echeburúa, 2012). It is worth noting that the studies by Alonso-Arbiol et al. (2002) and by Valle and Moral (2018) reported greater association with a preoccupied attachment style and a lesser degree of association with a fearful attachment style. That is, individuals with ED tend to see themselves negatively and the difference between the two types of attachment would be given by the perspective of others, which fluctuates as negative in the fearful, and positive in the preoccupied (Bartholomew & Horowitz, 1991). Consistent results were reported by Estévez et al. (2018) in a study involving Spanish teenagers in which they found that ED was associated with parental permissiveness and childhood trauma. These results also explain the theory proposed by Karakurt (2012) on jealousy in Turkish university students, who found that a model of self and a model of others affects attachment styles and jealousy; as well as that of Guzmán and Contreras (2012) who concluded that individuals with a negative view of themselves would tend to manifest preoccupation and fear when faced with abandonment by the attachment figure, and vice versa.

This study also found that separation anxiety triggers plan modification, a search for emotional expression, and attention seeking. In separation anxiety and fear of being alone, it is perceived threats (Lemos & Londoño, 2006; Lemos, Londoño, & Zapata, 2007) that lead to the deployment of active control strategies (search for emotional expression, plan modification, and attention-seeking) aimed at leading the individual to becoming the center of the partner's life. In this respect, studies have shown that women with ED tend to neglect their own needs and distance themselves from friends and relatives because of the partner (Amador-Velázquez, Torres-Hernández & Rodríguez García, 2015; Villa Moral Jiménez & Sirvent Ruiz, 2009). These strategies, in the same way as the search for emotional expression, constitute ways in which people with ED can feel secure vis-à-vis the mistrust they feel (Salamanca & Forero, 2014; González-Jiménez & Hernández-Romera, 2014).

It is worth mentioning that according to Ferreyra, Rueckner, Cambiaso, and Paredes (2004), these strategies to control and subordinate the partner as well as the fear of abandonment emerge from unrealistic relationship expectations and the manifestation of irrational demands such as you should and the catastrophic thinking of an inflexible personal style. This coincides with what has been proposed with regards to the cognitive profile of individuals with ED (Lemos, Jaller, González, Díaz, & De La Ossa, 2012). Studies on contemporary relationship styles confirm the same results. Estévez et al. (2017) showed that Internet and cell phone addiction are associated with an avoidance of being alone, which in this case involves virtual attention-seeking and is something that has been confirmed in young Colombian couples (Espinar, Zych, & Rodríguez-Hidalgo, 2015).

Finally, this study found that impulsivity and separation anxiety lead to attention seeking in individuals with ED. The fact that this is the only component to be associated with impulsivity leads us to hypothesize about whether it is this strategy that gives rise to the relationship between ED and suicidal behavior (Siabato & Salamanca, 2015) or whether it is this component that explains the association between ED and violence in love relationships (Aiquipa, 2015; Romero-Martínez & Moya-Albiol, 2013). The latter may be true because it has been found that attention-seeking is greater in men (Lemos & Londoño, 2006) and that high levels of ED in men predict physical aggression against the partner (Bornstein, 2006). This factor differs from what Estévez et al. (2018) reported for Spanish teenagers, wherein impulsivity was found to be related to all ED components. The difference in the results may be due to the use of different questionnaires to measure ED; however, it is worth pointing out that the study mentioned above found that ED mediates the relationship between impulsivity and attachment, thus acknowledging that impulsivity, rather than being a factor that emerges from ED, leads people with ED to manifest clinging behavior.

Anxiety and depression are strongly associated to ED (Santamaria et al., 2015; Siabato & Salamanca, 2015). Depression was shown to be directly associated with plan modification, whereby the modification of the individual's own plans to reduce separation anxiety would lead the individual with ED to put off activities that he or she finds gratifying or pleasant. This aspect has been related to the precipitation of depressive disorders (Dimidjian, Martell, Addis, & Herman-Dunn, 2008), and may also be related to the result found by Estévez et al. (2017), in that plan modification could play a role as a strategy used by the individual with ED to avoid being alone, particularly when the partner fills an emotional void. Finally, this would explain the results found by Ruiz (2013), who saw that in interventions, individuals with ED who went back to previous activities and again became close with their friends and relatives were able to improve their depressive symptoms.

This study found an association between anxiety and the search for emotional expression from the partner. Demanding affection is an active strategy used by the individual with ED to reduce anxiety (Lemos & Londoño, 2006), whereby if the individual with ED does not receive the appropriate response, the anxiety will increase, and if he or she does receive the appropriate
response, this will reinforce the tendency to continue to seek emotional expression (Clark & Beck, 2010). This has also been described by González-Jiménez and Hernández-Romera (2014) for Spanish teenagers. It is worth mentioning that the results found here refer to the association between anxiety and one of the interpersonal strategies used by individuals with ED, in contrast to Spanish studies which have found that it is an avoidance of being alone that is associated with anxiety and depression (Estévez et al., 2017; Urbiola et al., 2017).

This article contributes knowledge with regards to the treatment of ED by creating a model of its functioning that allows health professionals to consider it as based in the individual and stretching out to cover the global situation and vice versa. For example, when patients with ED present depressive symptomatology, this model can lead us to think that plan modification—which enables coping with separation-anxiety—may have failed, but that it functions to perpetuate depressive symptoms. The model also allows us to approach anxiety symptoms through the exploration of the presence of an active search for emotional expression strategy, where an active attention-seeking strategy allows us to explore the presence of a personality trait of impulsivity. Finally, the model could be used as theoretical support for the design of prevention or early intervention plans for the population at risk of ED in the stages in which the active strategies begin to emerge.

This article has a number of limitations. Given that it is a cross-sectional study, the relations made explicit here were modeled using structural equations. As a result, they cannot determine whether what we are dealing with are causal relationships or risk ones. Rather, these are based on the theoretical models and scientific evidence currently available. It was also necessary to eliminate the borderline expression component from the analysis given its low prevalence in the participants. Finally, it is important to point out that the sample analyzed belongs to private universities in Medellín, which may limit the generalization of results to other populations. It is therefore important to develop future studies involving populations with different age ranges, and clinical populations that shed light on the importance of these components in ED and their relationship with emotional symptomatology.

In sum, this study describes the relationships between the components of ED and symptoms of anxiety, depression, and impulsivity. It also explains the association between the symptomatology and behaviors associated in ED, pointing out the course of its development such as, for example, the fact that a fear of being alone may trigger depression or anxiety according to the strategy used.

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**References**


