Psychometric properties of the dependent ideation scale

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Abstract: Dependent ideation is based on (patriarchal) gender mandates and romantic love ideals leading to the idea that a partner is absolutely necessary in a person’s life; this attitude is associated with fear of being single, abnegation, and difficulty receiving affection. Method: The construction of the scale used a sequential derive method including a first phase focused on content validity followed by a transversal design approach for exploratory factor analysis and confirmatory factor analysis (CFA) with a different population sample. Finally, using the same design, convergent and discriminant validity correlations between two different measurement instruments were obtained. The total sample included 617 participants from the state of San Luis Potosí (center) and the city of Tijuana (northern border), both in Mexico. Results: Content validity was determined using Kendall’s W with an average of .272, as well as Aiken’s V, with an average of .905. CFA indicated a composite reliability > .75 for all factors, AVE > .50 and MSV < .209. Therefore, the instrument’s reliability and validity properties were found to be adequate to measure dependent ideation. Additionally, remarkable criterion, convergent, and discriminant validity values were obtained.

Keywords: psychometrics; gender mandates; emotional dependence; social psychology.

Introduction

Dependent ideation refers to cognitions inherited from patriarchy and based on gender mandates and ideal representations of romantic love, which can lead the individual to think that a partner is necessary in a person’s life; these ideations can result in fear of being single, self-sacrifice, surrender, the need to please one’s partner, and as a crucial element, the difficulty to receive affection can result in confusing a proper couple relationship with a relationship based on companionship.

Thus, dependent ideation consists in a series of cognitions based on which the person sets out to seek a partner, which could result in emotional dependence or codependency for the person.

According to a national survey on relationship dynamics carried out by the National Institute for Statistics and Geography (INEGI, 2016), seven out of every 10 women (66.1%) suffer from violence from their partner; half of these women (49%) reported emotional violence, while 34% reported physical violence, and 41.3% sexual violence. Additionally, 7 young women were murdered each day in Mexico in 2015 (INEGI, 2017).

These alarming violence figures associated with gender and family households are part of a problem that needs to be addressed using reliable and valid measurement instruments (the purpose of the present study) to evaluate prevention programs. Additionally, to the best of our knowledge, psychometric instruments for emotional dependence suitable for people not necessarily involved in a couple relationship are unavailable in the literature.

Emotional dependence

The concept of emotional dependence refers to a set of ideas, behaviors, and emotions revolving around an extreme necessity of having a significant other. It is a pattern learned throughout the individual’s life, associated with gender stereotypes and mandates emanating from the patriarchal system involving sense of guilt, fear of loneliness, necessity of approval, self-neglect, devaluation of the relationship at the intimate level, and selfless acceptance of instability. It is characterized by control and dominance, and a permanent feeling of instability and mistrust (F. Galán & Villalobos, in press).

Castelló (2012) refers to emotional dependence as a pattern of unsatisfied needs that the person tries to appease using people (for the purposes of the present study, such pattern of needs will be associated with romantic love and gender mandates); emotionally dependent people place their partners before everything else and have an excessive desire of affection, which must be directed exclusively at them. They idealize their partner and are submissive, fear being abandoned, and have a set of defining characteristics such as low self-esteem, fear of loneliness, and the need to be liked. Beltrán-Morillas, Expósito, and Valor-Sebura (2015) assert
that conflict is avoided in emotional dependence relationships in order to preserve the bond with the partner due to the crucial importance of the partner for the dependent person. González-Jiménez and Hernández-Romero (2014) consider that people can abandon their own plans because of their fear of being alone, even if such choice is detrimental for themselves.

Emotional dependence is an extreme affective need felt by a person for different people throughout their couple relationships (Espíritu, 2015, p.2). Villegas and Sánchez (2013) assert that a need to be protected and cared for is involved, as well as a difficulty to end the relationship, which results in the person isolating themselves from their social networks.

Addressing codependency (emotional dependence towards and addict), Noriega (2011) defines the concept as a relationship involving constant suffering and dissatisfaction in which the dependent person is devoted to their partner before themselves. Other factors in play are insufficient personality development, emotional repression, denial, and need to rescue; these factors were measured by the authors using an instrument, which was used for convergent validity purposes in the present study.

Gender mandates and romantic love

The subjective instance of obligations and prohibitions assumed as part of gender identity configured as stereotypes based on patriarchal ideology is known as gender mandate (Lagarde, 2005). Some of these are typically feminine, such as a predisposition to love, maternity, and self-denial, as well as dependence, passivity, obedience, and affectivity (Bosch, Ferrer, Ferreiro, & Navarro, 2013). According to Barraca (2015), people abandon or sacrifice their own needs due to guilt.

Yago (2011) suggests that gender conditioning underlies devotion to the partner and the need to please them. Gender conditioning consists in roles assigned to men and women by cultural gender models, and they are associated with subjectively constructed psychic stances of masculinity and femininity based on internalized cultural models (Yago & Tomás, 2013, p.419). This concept is in line with Aiquipa (2015), who argues that emotional dependency can take people other than one’s couple as its object (which rather represents the psychiatric construct of dependent personality disorder) and characterizes gender conditioning as a trait that renders women submissive and in need of others.

For men, gender mandates demand achievement, seduction, conquer, receiving love, protecting. For women, the mandates demand surrendering their lives to (romantic) love, where gender violence exists as a dormant possibility because it is believed to bring sense into their lives. Accordingly, relinquishing the possibility of ‘love’ is seen as a sign of failure because love is believed to ‘move mountains’; however, these ideas may falsely justify abuse (Bosch et al., 2013).

The romantic ideal of contemporary relationships proposed by Rodríguez (2015) highlights the pertinence and necessity of a dependent ideation scale (DIS); as the author states, the contemporary ideal of romantic love among adolescents weights suffering and indifference as exciting elements and equates the degree of suffering with the intensity of love. Therefore, the more difficult, enigmatic, and complex a relationship is and the more possible it is to emotionally abduct the partner or be abducted by the partner, the more is the relationship charged with love (Rodríguez, 2015, p.10). The author also highlights the permanent psychological power exercised by one of the partners on the other in the form of indifference, abandonment, and other types of violence that result in emotional dependence, where love rapidly becomes pathological.

Other measurement instruments

Table 1 below presents multiple measurement instruments focused on themes close to the focus of the present study; it should be highlighted that the need of a partner and fear of loneliness are a constant among most of these instruments.

Method

The construction of the scale used a derivative sequential method proposed by Hernández, Fernández, and Baptista (2014); a literature review was conducted first, which was used to generate initial items to be evaluated by judges for content validity. After that, a cross-sectional analysis was designed for exploratory factor analysis (EFA); a different sample was used for confirmatory factor analysis (CFA). Finally, the same design was used to obtain correlations for convergent and discriminant validity using two different measurement instruments (codependency and attachment styles, which are described in the Instruments section).

Sample

The first sample was evaluated for content validity by three judges with PhD or doctoral intern status, one of them specialized in human systems, another an expert in gender studies, and the third judge was an expert on emotional dependence. The second sample, used for AFE, included n = 450 participants (M = 23.37, SD = 6.79), with an age range between 16 and 59 years) from the city of San Luis Potosí; 188 (41.8%) were men and 262 (58.2%) were women. Most of the subjects were single (390, 87.2%), 50 were married (11.3%), and 6 (1.5%) were divorced. Almost 40% were in a relationship and 47% were not in a relationship (13% decided not to respond). Sexual orientation different from heterosexual was reported by 23.8% of the subjects, and 72% reported being heterosexual (the rest failed to respond). The sample used for CFA was composed of N = 167 participants of whom 86 (51.5%) were women and 81 (48.5%)
were men; mean sample age was 23.47 (SD = 5.76); 34% were in a relationship, 26 were not in a relationship, and 40% decided not to respond. Heterosexual orientation was reported by 90% of the population, whereas 2.5% of participants responded being homosexual and 3% reported being bisexual. This sample included people from different municipalities in San Luis Potosí (58 participants, 35%), from Tijuana (100 participants, 61%), and from the capital municipality of San Luis Potosí (rest of sample).

### Table 1. Comparison of dependence and codependency measurement instruments.

<table>
<thead>
<tr>
<th>Name of the instrument</th>
<th>Authors and year</th>
<th>Sample</th>
<th>Factors or dimensions</th>
<th>Evidence of validity</th>
<th>Evidence of reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional dependence questionnaire</td>
<td>Lemos &amp; Londoño (2006)</td>
<td>High school and college students, 815 people of both sexes, age M = 24.1 SD 9.3.</td>
<td>Separation anxiety, affective expression, modification of plans, fear of loneliness, search for attention.</td>
<td>AFE, main components using varimax rotation. Explained variance: 64.7%.</td>
<td>α = .92, lowest factor α = .62 and highest factor α = .87</td>
</tr>
<tr>
<td>Emotional dependence inventory</td>
<td>Aiquipa (2012)</td>
<td>757 people (31 diagnosed subjects)</td>
<td>Fear of breaking up with partner, fear of loneliness and low tolerance to being alone, partner is priority, need to have access to partner, desire of exclusivity, subordination and submission, desire to control and dominate.</td>
<td>Explained variance: 68.25%. AFE with varimax orthogonal rotation. Content validity by inter-judge evaluation.</td>
<td>Lowest factor α = .76 and highest factor α = .89</td>
</tr>
<tr>
<td>Emotional dependence scale (validation of a scale by Lemos &amp; Londoño, 2006)</td>
<td>Ventura &amp; Caycho (2016)</td>
<td>520 Peruvian college students, age M = 22.28, SD 5.62.</td>
<td>Same as Lemos &amp; Londoño (2006)</td>
<td>AFE and AFC CFI = .99. From α = .64, to NNFI = .98; SRMR = .06; RMSEA = .02; AIC = .187,67, low AV Fi.</td>
<td>41 women with diagnosis. Judges, 76% sensitivity and 69% specificity. Cut-off point = 32. 50.8% of total variance. Varimax rotation for EFA.</td>
</tr>
<tr>
<td>Codependency instrument</td>
<td>Noriega (2011)</td>
<td>230 women, age M = 33.7, SD 10.4.</td>
<td>Denial mechanism, incomplete identity development, emotional repression, need to rescue.</td>
<td>Denial mechanism, incomplete identity development, emotional repression, need to rescue.</td>
<td>Denial mechanism, incomplete identity development, emotional repression, need to rescue.</td>
</tr>
</tbody>
</table>

### Procedure

Judge selection was based on convenience, seeking people who had background knowledge about the studied phenomena and ample experience in the fields of emotional dependence or psychology. The EFA and CFA analyses were conducted per theoretical principles proposed by the American Psychological Association (APA, 2010) in regard to anonymity, non-invasive methods, and voluntary participation (sections 3.04, 8.05, and 9.03); the survey form explained the nature and intention of the study. Convergent validity was used with the EFA sample (which is why the sample will not be described in order not to repeat the information), and similarly, AFC used discriminant validity. Factor 10.3 software from Rovira I Virgili University (Lorenzo-Seva & Ferrando, 2015) was used to process the data used in EFA, and IBM AMOS 21.0 was used for CFA.

### Analysis of data

Due to the nature of this paper, this section presents a brief analysis of the data, and the results section goes into further detail. Items were analyzed using Aiken’s V and Kendall’s W during the initial phase, and then, EFA was carried out using unweighted least squares and oblimin rotation. A parallel analysis was performed to determine the number of instrument dimensions and items with factor load below .4 were eliminated. Additionally, the characteristics of the model were analyzed for goodness of fit (GFI), adjusted goodness of fit index (AGFI), and comparative fit index (CFI). Once a definitive model was obtained, CFA was carried out using maximum likelihood rotation. Properties determined as desirable to accept the model were CMIN/df less than 5, GFI > .95, CFI>.9, RMSEA < .05, SRMR < .09, and Pclose > .05; items were eliminated according to standardized covariance residual matrix scores (SRC > 2.58) until the expected model was found. Validity and reliability were determined, and, based on the model previously obtained, Pearson’s correlations were calculated using Noriega’s (2011) instrument for convergent validity and the instrument by Fernández-Fuentes, Orzgaz, Fuertes, and Carcedo (2011) for divergent validity. Finally, Noriega’s (2011) instrument was used to determine that people with scores higher than 32 could be considered as codependent; therefore, a comparison was performed using Student’s t statistic, which confirmed that the dependent ideation scale produced significantly different results between codependent and non-codependent groups. This was considered as criterion evidence.

### Instruments

Noriega’s (2011) ICOD codependency test is a screening test to detect cases of codependency. It consists of 30 test items with responses from 0 (not at all) to 3 (a lot), its...
Cronbach’s alpha value is .90, and its cut-off point indicating codependency diagnosis is a score of 32. It is valid for Mexican population. Discriminant validity was obtained by the short version of the Experiences in Close Relationship-Revisited (ECR-R), which has been validated for Spain by Fernández-Fuentes, Orgaz, Fuertes, and Carcedo (2011).

Results

Content validity

All 59 initial items were submitted to three judges: a PhD in human systems, a PhD in clinical psychology focused on gender mandates, and a doctoral intern in psychology. The three judges shared an at least “fair” degree of agreement (as in the ranking by Dubé, 2008) in their average scores for pertinence, usefulness, and drafting, which were obtained using Kendall’s W (average .272). Content validity was obtained by Aiken’s V per the procedure described by Escobar-Pérez and Cuervo-Martínez (2008); the obtained coefficient was .86, which increased to .905 after three items were eliminated. These results indicate good content validity.

Exploratory factor analysis (EFA)

Once content validity was obtained, EFA was conducted based on recommendations by Lloret-Segura, Ferreres-Traver, Hernández-Baeza, and Tomás-Marco (2014), who suggest rotation using direct oblimin with unweighted least squares (ULS) extraction method; three factors were obtained by parallel analysis (Timmerman & Lorenzo-Seva, 2011). A Kaiser-Meyer-Olkin test result of .8782 was obtained, as well as a Bartlett’s statistic result of 2700.8 (df = 190; p = .000010) and explained variance of 48.11%. GFI was .99, AGFI was .99, CFI was .96, and Cronbach’s alpha was .72 for the first factor, .82 for the second factor, and .876 for the third factor. Items with factor loads lower than .4 were eliminated and the final number of items was 20. Bentler’s simplicity index (1977) was .99391. Additionally, root-mean-square residual (RMSE) was = .0479, and given that the acceptance value according to criteria by Kelley (1935) is = .0472, our model was acceptable.

Confirmatory factor analysis

CFA was carried out using maximum likelihood rotation, as recommended by Lloret-Segura et al. (2014) and Herrero (2010); the obtained model included 11 items grouped in three factors, which were named based on their content: abnegation, difficulty receiving affection, and fear of being single. The same number of factors was obtained by EFA, although the number of items was significantly reduced. Table 2 compares the initial and final models and the model obtained using a common factor. The table also describes the required psychometric properties to assure model adequacy proposed by Arias (2008), Batista-Foguet, Coenders, and Alonso (2004), Herrero (2010), Lorenzo-Seva (2000), and Lloret-Segura et al. (2014).

Table 2. Properties of confirmatory factor models for the dependent ideation scale.

<table>
<thead>
<tr>
<th>Indices/score</th>
<th>Initial Model</th>
<th>Final Model</th>
<th>Latent common factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/df</td>
<td>1.873</td>
<td>1.239</td>
<td>0.799</td>
</tr>
<tr>
<td>p value of model</td>
<td>.000</td>
<td>.143</td>
<td>.769</td>
</tr>
<tr>
<td>GFI</td>
<td>.851</td>
<td>.950</td>
<td>.977</td>
</tr>
<tr>
<td>AGFI</td>
<td>.813</td>
<td>.917</td>
<td>.947</td>
</tr>
<tr>
<td>SRMR</td>
<td>.544</td>
<td>.0479</td>
<td>.0344</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.073</td>
<td>.038</td>
<td>.000</td>
</tr>
<tr>
<td>PCLOSE</td>
<td>.002</td>
<td>.705</td>
<td>.976</td>
</tr>
<tr>
<td>TLI</td>
<td>.867</td>
<td>.980</td>
<td>1.017</td>
</tr>
</tbody>
</table>

As can be appreciated, the final three-factor model is the most congruent and was found to have the highest explanatory power; additionally, the fact that it could be accomplished with only one latent common factor is proof that the set of three factors measures a single construct. The final CFA model can be appreciated in Figure 1; the $X^2$ of the model is 49.54, with 40 degrees of freedom. Reliability and validity characteristics are presented in Table 3.

Figure 1. Confirmatory factor analysis of dependent ideation scale.
Table 3. Evidence of validity and reliability based on confirmatory factor analysis for the dependent ideation scale.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Composite reliability (CR)</th>
<th>Average variance extracted (AVE)</th>
<th>Maximum shared variance (MSV)</th>
<th>Maximum reliability MaxR (H)</th>
<th>Abnegation</th>
<th>Fear of being single</th>
<th>Difficulty receiving affection</th>
<th>Difficulty receiving affection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnegation</td>
<td>.779</td>
<td>.544</td>
<td>.209</td>
<td>.805</td>
<td>.737</td>
<td>.348</td>
<td>.509</td>
<td>.209</td>
</tr>
<tr>
<td>Fear of being single</td>
<td>.876</td>
<td>.586</td>
<td>.185</td>
<td>.921</td>
<td>.430</td>
<td>.312</td>
<td>.519</td>
<td>.752</td>
</tr>
<tr>
<td>Difficulty receiving affection</td>
<td>.756</td>
<td>.509</td>
<td>.209</td>
<td>.937</td>
<td>.457</td>
<td>.315</td>
<td>.519</td>
<td>.713</td>
</tr>
</tbody>
</table>

Table 4 below presents convergent validity and Table 5 presents discriminant validity. In both cases, the data show the usefulness and pertinence of the scale, which were obtained by correlating totals and every one of the factors.

Table 4. Convergent validity of dependent ideation scale and ICOD codependency scale.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Denial</th>
<th>Incomplete development of identity</th>
<th>Emotional Repression</th>
<th>Need to rescue</th>
<th>Overall codependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnegation</td>
<td>.348</td>
<td>.357</td>
<td>.900</td>
<td>.652</td>
<td>.406</td>
</tr>
<tr>
<td>Fear of being single</td>
<td>.428</td>
<td>.338</td>
<td>.517</td>
<td>.644</td>
<td>.428</td>
</tr>
<tr>
<td>Difficulty receiving affection</td>
<td>.344</td>
<td>.312</td>
<td>.215</td>
<td>.265</td>
<td>.391</td>
</tr>
<tr>
<td>Overall dependent ideation</td>
<td>.527</td>
<td>.470</td>
<td>.519</td>
<td>.752</td>
<td>.594</td>
</tr>
</tbody>
</table>

All correlations are significant p < 0.01 (bilateral).

Table 4 shows that abnegation has a moderate correlation with need to rescue and fear of being single, and there is a similar correlation with emotional repression. On the other hand, the highest correlation of difficulty receiving affection with another factor is with overall codependency, which is in turn correlated with overall dependent ideation (r = 0.6, p < .01); given that the measures are different, the association provides grounds for the use of the instrument as a prevention tool.

Criterion validity was investigated once the association between the scales was determined; for that purpose, we leaned on one of the strengths of Noriega’s (2011) questionnaire, which proposes a score of 32 or higher as the cut-off point to determine a case of clinical codependency. Thus, overall dependent ideation scale scores of groups with scores of 32 or higher were compared with groups below that score on ICOD. A Student’s t test was carried out for independent samples, which produced a mean result of 24.77 (SD = 6.36) for people not presenting codependency and a mean od 34.24 (SD = 9.02) for those presenting codependency (p < .000); difference between means was 9.47, typical error was .987, Cohen’s d was -1.212, and mean effect size was -.518.

Table 5. Discriminant validity of romantic attachment questionnaire and dependent ideation questionnaire.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Abnegation</th>
<th>Difficulty receiving affection</th>
<th>Fear of loneliness</th>
<th>Overall dependent ideation scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance</td>
<td>Correlation coefficient</td>
<td>.077</td>
<td>-.118</td>
<td>-.066</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Correlation coefficient</td>
<td>.341</td>
<td>.144</td>
<td>.419</td>
</tr>
<tr>
<td>Romantic Attachment Questionnaire</td>
<td>Correlation coefficient</td>
<td>.424</td>
<td>.152</td>
<td>.384</td>
</tr>
<tr>
<td>Significance</td>
<td>Correlation coefficient</td>
<td>.01</td>
<td>.001</td>
<td>.01</td>
</tr>
<tr>
<td>Significance</td>
<td>Significance</td>
<td>.064</td>
<td>.01</td>
<td>.01</td>
</tr>
</tbody>
</table>

As can be appreciated in Table 5, the avoidance is not congruently associated with any of the elements of the dependent ideation scale, but anxiety has moderate correlations with abnegation and fear of loneliness, as well as with the overall dependent ideation scale score. According to the Spanish questionnaire, romantic attachment has a moderate correlation with dependent ideation.

Discussion

The dependent ideation scale represents an original approach to ideas associated with emotional dependence, romantic love ideals embedded in the patriarchal discourse that can result in emotional dependence or codependency, as could be confirmed through convergent validity with the ICOD test. Dependent ideation is a phenomenon composed of fear of being single, abnegation (resignation, self-sacrifice, and surrender as a consequence of romantic love ideals) and difficulty receiving affection. Difficulty receiving affection is an innovative element in the area because such hindrance explains why people remain in harmful relationships: they confuse companionship with love and seek to abide by gender mandates, as stated by Lagarde (2005) and Bosch et al. (2013).

EFA showed the dependent ideation scale to have adequate psychometric properties. Such properties were confirmed by CFA, which was applied to data from different populations in the state of San Luis Potosí and the city of Tijuana, both near the Mexican northern border (locations were chosen due to their cultural variety and their closeness...
to a different country). It is, therefore, a valid and reliable scale having a sound confirmatory model. In contrast with similar measurement instruments, our instrument used results from more than one EFA instead of only one, as in Aiquipa (2012), Noriega (2011), and Lemos and Londoño (2006). Moreover, only one more instrument uses CFA (Ventura & Camacho, 2006), but this instrument’s reliability is very low, probably because it seeks to validate an instrument by Lemos and Londoño (2006), who rotated the main components. In sum, the scale presents remarkable psychometric properties, confirmed by the significant relations the scale has with Noriega’s (2011), which is used to diagnose codependency in Mexico. Additionally, our instrument presents statistically significant differences and a contrasting mean effect size in comparison with Noriega’s (2011) for people to be diagnosed as codependent; therefore, it is a criterion measure used to verify the usefulness of the proposed scale. The present dependent ideation scale will allow for the measurement of the effectiveness of gender-based prevention and intervention programs, as well as programs focused on violence in dating relationships and emotional dependence. Additionally, the scale itself can provide data to be used in detecting the need for intervention and to evaluate risk due to its close similarity with the codependency instrument (and its diagnostic criteria).

The romantic attachment questionnaire helped to verify the relationships between implicit romantic ideas in dependent ideation. The more significant correlations regarding anxious attachment and romantic love confirm statements by Noriega (2011) in that those two factors are associated with future relationships marked by dependency and conflict, which can be addressed and prevented from a very early age.

**Conclusion**

The dependent ideation scale is a reliable instrument. The present paper presents evidence of its construct, criterion, convergent, and discriminant validity. The scale allows for the detection of abnegation, difficulty receiving affection, and fear of being single as elements associated with harmful relationships based on codependency and anxious attachment. The scale can be effectively employed to measure experimental designs, to study as psychiatric or psychological treatments, or in workshops and social campaigns aimed at preventing codependency and emotional dependence, phenomena associated with substance abuse and violence within relationships.

Concerning limitations, an evidence of the scale’s temporal reliability is still considered necessary. Additionally, the scale presents few non-heteronormative conformations, which indicates the need to investigate whether the dependent ideation phenomenon affects men and women equally and whether reducing gender mandates affects dependent ideation. Dependent ideation should also be used together with measures of male chauvinism and gender stereotypes. Finally, it would be ideal to use the scale with populations in countries other than Mexico, especially in regions with higher gender equality ratings, and evaluating whether dependent ideation is associated with gender violence could also add value to the findings presented in this paper.

**References**


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