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Problematic Technology Use in a clinical sample of children and adolescents. Personality and behavioral problems associated

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Introduction. In parallel to the rapid growth of access to new technologies (NT) there has been an increase in the problematic use of the same, especially among children and adolescents. Although research in this field is increasing, the studies have mainly been developed in the community, and the characteristics associated with the problematic use of NT are unknown in samples that require clinical care. Therefore, the aim of this study is to analyze the relationship between problematic use of video games (UPV) and Internet (UPI) and personality traits and behavior problems in a clinical sample of children and adolescents.

Methodology. The sample consists of 88 patients who were examined in the clinical psychology consultation in the Mental Health Unit for Children and Adolescents of the University Hospital of Santiago de Compostela. Data were obtained from self-reports and rating scales filled out by parents.

Results. 31.8% of the participants present UPI and 18.2%, UPV. The children and adolescents with UPNT have lower levels of Openness to experience, Conscientiousness and Agreeableness and higher levels of Emotional instability, global Impulsivity and Externalizing behavior problems, as well as Attention and Thought problems.

Conclusions. UPNT is a problem that emerges as an important issue in clinical care for children and adolescents, so its study in child and youth care units is needed. Understanding the psychopathological profile of children and adolescents with UPNT will allow for the development of differential and more specific interventions.

Keywords: Internet, Video Games, Personality, Behavioral Problems

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El uso problemático de nuevas tecnologías en una muestra clínica de niños y adolescentes. Personalidad y problemas de conducta asociados

Introducción. Paralelamente al rápido crecimiento del acceso a las nuevas tecnologías (NT) aumenta el uso problemático que se hace de las mismas, especialmente entre los niños y adolescentes. A pesar de que la investigación en este campo está creciendo, los estudios realizados se desarrollan fundamentalmente en comunidad, y no se sabe qué características se asocian al uso problemático de NT (UPNT) en muestras que demandan asistencia clínica. Por ello, el objetivo de este estudio es analizar la relación entre uso problemático de los videojuegos (UPV) e Internet (UPI) y los rasgos de personalidad y problemas de conducta en una muestra clínica de niños y adolescentes.

Metodología. Participaron 88 pacientes que acudieron a la consulta de psicología clínica de la Unidad de Salud Mental Infanto-Juvenil (USM IJ) del Complejo Hospitalario Universitario de Santiago de Compostela (CHUS). Se tomaron datos procedentes tanto de autoinformes como de escalas de calificación cumplimentadas por los padres.

Resultados. El 31,8% de los participantes presentan UPI y el 18,2% presenta UPV. Se encuentra que los niños y adolescentes que muestran UPNT, presentan menores niveles de Apertura, Responsabilidad y Amabilidad y mayor Inestabilidad Emocional, mayor Impulsividad global y mayores Problemas de Conducta Externalizantes, Problemas de atención y de pensamiento.

Conclusiones. El UPNT es un problema que emerge como entidad de importancia en la clínica infanto-juvenil, y cuyo alcance es necesario conocer en las unidades asistenciales infanto-juveniles. Además, conocer el perfil psicopatológico de niños y adolescentes con UPNT permitirá realizar intervenciones diferenciales y más específicas.

Palabras clave: Internet, Videojuegos, Personalidad, Problemas de Conducta

INTRODUCTION

The problematic use of the new technologies (PUNT) is characterized by a neglect of academic, labour or domestic activities and their substitution by online activities such as social networks, email and/or games[1]. Recent data places the prevalence of PUI in adolescents at 13.3%[2] and that of PUV at 9%[3].

Youth and adolescents suffering from psychiatric disorders may be an especially vulnerable population with regards to the development of problems related to Internet use. At least two studies have revealed that PUNT is approximately 10 times more prevalent in mental health care patients as compared to the general population[4,5].

Given the relevance of this phenomenon, recently, there has been a growing interest in examining the underlying factors of PUNT, with special interest being paid to personality dimensions and associated behavior problems.

Problematic Use of the Internet (PUI)

The relationship between the Big Five personality traits, hegemonic in the study of personality traits, and the problematic use of the Internet, has been explored by various authors. Some studies have revealed that PUI is related to low Conscientiousness[6] and high Agreeableness[7,8] although the data regarding Neuroticism[8-10], Extroversion[10,11] and Openness[7,12] is more contradictory. Thus, additional clarification is necessary with regards to the relationships between the Big Five personality traits and Internet use.

With regards to behavior problems, PUI has been related to withdrawal and loneliness, which are predisposing factors for the development of unhealthy Internet thoughts and behaviours which may interfere with the normal development of social skills. This tendency to compensate for shortcomings in the real world through the virtual one may intensify the probability of developing PUI. Furthermore, it has also been related to anxiety, depression, a lack of impulse control, insomnia, suicidal thoughts, attention deficit (with or without hyperactivity), social phobia, hostility, psychosis, disorders of the Autism spectrum, obsessive-compulsive disorder, aggression and problematic alcohol and drug use[8,13-16]. Children and adolescents may use the Internet as a source of excitation, intimacy, friendship and respect, thereby compensating for a low self-esteem, a variable that appears on a repeated basis in different studies[17]. Furthermore, individuals with a poor self-opinion and difficulties in socializing due to shyness or lack of self-esteem, they may use the Internet as an alternative for socialization, given that it allows them to gain openness and confidence without having to interact face to face with others.

Problematic Use of Videogames (PUV)

PUV has been related with impulsivity, limited reflexivity and a low frustration tolerance[18]. According to the Big Five Model, a lower degree of Conscientiousness and Openness and a higher degree of Extroversion have been significantly associated with PUV[6,18]. As for behavior problems, a relationship has been found between criminal behavior and PUV[18] and individuals who spend over three hours a day playing videogames are found to have a greater probability of being hyperactive[14], getting involved in fights and having a decreased interest in school[20]. Depression, anxiety, hostility and attention deficit hyperactivity disorder are associated with PUV[21]. However, other studies have affirmed that videogames do not negatively affect behavior, attention or emotional problems[22].

These studies have interesting results, but there is insufficient consistency in their findings, therefore information is limited in order to make predictions based on the Big Five Model, behavior problems and PUNT. Furthermore, these studies tend to be carried out in community settings, and the comorbidity in clinical samples is unknown. We also are unaware of the specific characteristics associated with PUNT in samples requiring clinical care. Furthermore, most of the studies draw their conclusions from online questionnaires, which lack adequate supervision to ensure the quality of the data. Therefore, the main objective of this study is to determine the relationship between PUI and PUV and personality traits, types of impulsivity and child-youth behavior problems. The secondary objectives of the study are: 1) to determine the prevalence of PUNT in this USM, 2) to determine the association between PUNT and the sociodemographic variables, 3) to examine the consistency between the perception of parents and those of children regarding PUNT and 4) to determine how study variables may be significant predictors of PUNT.

METHODOLOGY

Sample

The sample consisted of 88 patients visiting the clinical psychology consultation in the Mental Health Unit for Children and Adolescents of the University Hospital of Santiago de Compostela (CHUS). Inclusion criteria for this study were as follows: 1) treatment in the clinical psychology department of this child-youth USM between the months of March and August of 2015 and 2) being between the ages of 8 and 16. Exclusion criteria were: 1) the presence of considerable cognitive difficulties impeding the completion of the scales, 2) the decision not to sign the informed consent. Of the total sample, 67% were male and 33% were female.

Participants were diagnosed according to DSM IV-TR criteria, and therefore, as is common in the Child-Youth USM, the range of diagnosis is quite wide. In regards to the primary diagnosis, the most frequent diagnoses were: Attention deficit disorder and disruptive behavior (e.g. Attention deficit hyperactivity disorder, Oppositional defiant disorder) (n=40), Anxiety disorders (e.g. Social phobia, Generalized anxiety disorder) (n=13), Adjustment disorders (n=4), Learning disorders (e.g. reading disorders) (n=3). Certain Code Z diagnoses were also found (e.g. academic problems, parent-child problems) (n=18).

All of the patients were receiving psychotherapeutic treatment (Cognitive-Behavior Therapy) and 44.3% were receiving simultaneous pharmacological treatment, specifically, 29.5% were receiving stimulants, 5.7% anti-depressives, 3.4% anti-psychotics, 3.4% anxiolytics and antidepressants and 2.3% anxiolytics.

Instruments

In order to assess the principle study variable, PUNT, we used instruments created by Young (Internet Addiction Test, Parent-Child Internet Addiction Test and Videogames Addiction Test) given that these are the most frequently used in specific research on this topic[23] and in order to make comparisons between our clinical sample and those from other studies. Furthermore, diverse studies have demonstrated their psychometric suitability[24,25].

Internet Addiction Test (IAT)[26]

This scale consists of 20 items that may be scored on a scale from 1 (never or very rarely) to 5 (always). This instrument provides a global measure of the level of Internet addiction. According to their score, patients are classified in the following categories: without addiction (interval from 20-39 points), moderate addiction (interval from 40-69 points) and serious addiction (interval from 70-100 points).

Parent-Child Internet Addiction Test[26]

This scale measures the PUI of children and adolescents as perceived by their parents. It consists of 20 items that may be scored on a scale from 1 (never or very rarely) to 5 (always).

Videogames Addiction Test[26]

This instrument permits the examination of the level of addiction to videogames and its repercussions in the daily, social and emotional life, productivity and sleep in adolescents. The questionnaire consists of 8 items that may be scored on a scale from 1 (no, nothing) to 5 (yes, a lot). In addition to the quantitative scoring, a frequency of 5 of more of the assessed behaviours allows for the assessment of the dichotomous presence of addiction.

"Big Five" personality questionnaire for children and adolescents (BFQ-NA)[27]

Currently, there are few useful instruments to assess personality in children and adolescents and the BFQ-NA has been validated in our country and has consistently demonstrated its utility in young samples[28,29]. The BFQ-NA is an adaptation of the Big Five Model of personality for use in children and adolescents. These five dimensions are: Conscientiousness (assesses autonomy, order, precision and compliance with rules and commitments), Openness (includes elements of intellectual, creativity, cultural interest aspects), Extroversion (activeness, enthusiasm, assertiveness and self-confidence), Agreeableness (concern and sensitivity towards others and their needs) and Neuroticism (anxiety, depression, discontent or anger). This questionnaire contains 65 elements to be completed by the child/adolescent.

I.6 Impulsiveness Scale[30]

The I.6 Impulsiveness Scale forms a part of the IVE (Eysenck´s Impulsivity Inventory), together with the scales of Venturesomeness and Empathy, and it offers scores on general impulsiveness. In this study, we only applied the I.6 Impulsiveness scale which consists of 23 items with dichotomous yes/no responses. The I.6 is one of the most prestigious instruments and one of the most widely used in the assessment of general impulsiveness in youth.

UPPS Scale (Urgency, Premeditation, Perseverance and Sensation Seeking)[31]

This scale consists of 59 items that permit the assessment of five dimensions of impulse behavior: Negative urgency, Lack of perseverance, Lack of premeditation, Sensation seeking and Positive urgency. Each item was assessed using a Likert-like scale with 4 response choices, from 1 (in clear agreement) to 4 (in clear disagreement). This instrument, which has been widely used over the past decade, allows for the assessment of distinct facets of impulse behavior, offering a more nuanced vision of the types of impulsivity which may be associated with problems in the use of the new technologies.

Child Behavior Checklist (CBCL)[32]

This qualification scale, widely used in the area of child-youth psychology, has appropriate psychometric proper-

ties[33,34] that may be used to obtain the parent's reporting on the problems exhibited by the child, grouped into two large dimensions: internalizing and externalizing. It consists of 118 items that are applied to the mothers/fathers of the children and adolescents aged 6 to 18 years. The response format contains 3 alternatives, presented on a scale of frequencies ranging from "Not true" to "Very true".

Procedure

The research team was authorized by the Santiago-Lugo Research Ethics Committee of the *Consellería de Sanidade da Xunta de Galicia* to conduct the study in the Complejo Hospitalario Universitario de Santiago under registration code 2015/032.

All of the parents of the children and adolescents between the ages of 8 and 16 who visited the USM Child-Youth were informed of the study that was being conducted and those wishing to participate were asked to provide their informed consent. 88.64% of the population agreed to participate in the study. Upon completion of the clinical psychology visit, the child/adolescent completed the questionnaires administered by the first author of this study, a psychologist in the department where the study was conducted, while the father/mother/guardian completed their corresponding part in the waiting room.

Analysis

First, preliminary analyses were conducted in order to determine the sample descriptors. In addition, t-tests were used to compare the means, considering gender and whether or not pharmacological treatment was being received, and using PUI, PUV and PUI informed by parents as the dependent variables. A variance analysis was used to determine possible differences in the PUI, PUV and PUI informed by the parents based on the psychiatric pathology. A correlation analysis was also conducted in order to examine the relationship between self-reported PUI and PUI informed by the parents, as well as to establish the relationships between PUI, PUV and PUI informed by the parents and personality and behaviour problems.

Finally, in order to determine if personality and behaviour problems, considered collectively, predict PUI, PUV and PUI informed by the parents, hierarchical linear regression analysis was used, using personality and behaviour problems as the independent variables and PUI, PUV and PUI informed by the parents as the dependent variables. In the first step of the equation, the personality variables were introduced and in the second, the behaviour problems were introduced.

In all of the analyses, a significance criterion of .05 (bilateral) was used. Analyses were conducted using the SPSS 20 statistics program.

RESULTS

First, in the preliminary analyses conducted to determine the sample descriptives and their association with the basic socio-demographic variables (gender and age), significant differences were observed between boys and girls in the PUV ($t=2.45$, 83 gl, $p<0.05$), with higher scores being found for the boys (mean=12.49 as compared to 9.88 in the girls). In the correlation analysis of the study variables related to age, a negative correlation was only found between PUV and age (-0.24, $p<0.05$).

The analysis also considered whether or not the different psychiatric pathologies determined differences in the dependent study variables. In order to conduct the analysis, given that the diagnostic groups were of a reduced size, they were grouped into 6 categories: externalizing problems (n=40), internalizing problems (n=25), family problems (n=9), academic problems (n=9), borderline intellectual functioning (n=3) and disorder of the Autism spectrum (n=2). These groups were compared using variance analysis of the dependent study variables (PUI, PUV and PUI informed by the parents), with no significant differences being found (PUI: $F=0.47$, 5/82 gl, n.s.; PUV: $F=1.17$, 5/79 gl, n.s.; PUI informed by the parents: $F=0.25$, 5/81 gl, n.s.).

On the other hand, we also examined whether or not the presence of pharmacological treatment may be associated with PUNT. For this, we grouped the patients into two categories: those receiving pharmacological treatment and those not receiving such treatment. A t-test was conducted to determine whether or not there were differences between the means in PUI, PUV and PUI informed by the parents. The results did not reveal any significant differences between the groups (PUI: $t=-0.55$, 84 gl, n.s.; PUV: $t=-0.05$, 81, n.s.; PUI informed by the parents: $t=-0.76$, 83 gl, n.s.).

According to the criteria established by the Internet Addiction Test and the Videogame Addiction Test, 31.8% of the sample presented moderate PUI and 18.2% presented PUV. There were no serious cases of PUI or PUV. When the informants were the parents, 20.5% of the children/adolescents were found to present moderate PUI. Correlation analysis was conducted between the self-reported PUI and that reported by the parents and a moderate congruence was found between both (0.40, $p<0.001$).

In Table 1, the results are presented in response to the correlations between PUI, PUV and PUI informed by the parents and personality and behaviour problems.

As for the general personality traits, the three variables were negatively related with Openness. Furthermore, both the self-reported PUI and PUV were negatively related to Conscientiousness and Agreeableness and positively related to Neuroticism.

As for the types of impulsiveness, the PUV is associated with a greater lack of premeditation and a lack of perseverance. When taking into account the overall impulsiveness assessed by both the Eysenck scale and the Eysenck (I.6) and by the Whiteside and Lynam scale (UPPS), positive correlations were also observed with PUV and self-reported PUI.

As for the behaviour problems, both the self-reporting PUI as well as the PUI informed by the parents were related to increased attention problems, rule breaking behaviour

Table 1 Correlations between IA, VA and IA Parents and general personality dimensions (Big Five model), type of impulsiveness and behaviour problems

	PUI	PUV	PUI Parents
PERSONALITY			
General personality dimensions (Big Five model)			
Openness	**-0.29****	**-0.30****	**-0.23***
Conscientiousness	**-0.29****	**-0.29****	-0.18
Extroversion	-0.03	0.02	-0.09
Neuroticism	**0.46*****	**0.31****	0.14
Agreeableness	**-0.22***	**-0.23***	0.01
Types of impulsiveness			
Negative urgency	0.25	0.18	0.05
Lack of premeditation	0.23	**0.38****	0.16
Lack of perseverance	0.25	**0.31***	0.20
Positive urgency	0.18	0.18	0.04
Sensation-seeking	0.15	-0.05	0.18
Overall impulsiveness	**0.36*****	**0.31****	0.15
BEHAVIOUR PROBLEMS			
Anxious-depressed	0.05	0.01	0.10
Withdrawn-depressed	0.04	0.08	0.10
Somatic complaints	-0.01	0.02	0.09
Social problems	0.11	0.17	0.08
Thought problems	0.07	**0.23***	0.09
Attention problems	**0.25***	**0.24***	**0.23***
Rule-breaking behaviour	**0.29****	0.13	**0.33****
Aggressive behaviour	**0.30****	**0.27***	**0.27***
Internalizing problems	0.04	0.04	0.11
Externalizing problems	**0.32****	**0.25***	**0.31****

*$p<0.05$. ** $p<0.01$. *** $p<0.001$

IA: internet addiction; VA: videogames addiction.

Table 2 Regression analysis for the prediction of IA, VA and IA Parents, based on personality traits and behaviour problems

	PUI	PUV	PUI Parents
PERSONALIDAD			
Openness	0.03	-0.11	-0.30
Conscientiousness	-0.20	-0.17	0.04
Extroversion	0.07	0.14	-0.13
Neuroticism	**0.53*** **	**0.39** **	-0.03
Agreeableness	0.01	0.07	0.22
BEHAVIOUR PROBLEMS			
Anxious-depressed	-0.33	**-0.48** **	-0.02
Withdrawn-depressed	0.12	0.05	0.06
Somatic complaints	-0.03	-0.08	0.06
Social problems	0.03	0.22	-0.19
Thought problems	-0.19	0.13	-0.01
Attention problems	-0.06	-0.07	0.07
Rule-breaking behaviour	-0.01	-0.29	0.29
Aggressive behaviour	**0.33***	**0.41***	0.12
ADJUSTED TOTAL R SQUARED	0.24	0.17	0.06

*$p<0.05$. ** $p<0.01$. *** $p<0.001$

IA: internet addiction; VA: videogames addiction.

and aggressive behaviour. The PUV is related to increased thought and attention problems and aggressive behaviour. The three variables (self-reported PUI, PUI informed by the parents and PUV) are positively related to the overall dimension of Externalizing Behaviour Problems.

In Table 2, we see that the results relating to personality and behaviour problems, when considered collectively, predict PUI, PUV and PUI informed by the parents.

The hierarchical regression analysis reveals that Neuroticism and Aggressive Behaviour are significant predictors of both PUI and PUV. Also, Anxiety-Depression is a significant predictor of PUV.

Overall, PUI and PUV are the variables having a greater coefficient of explained variance. The most explained variable is PUI (R^2=0.24) and the least explained are PUV and PUI informed by the parents (R^2 of 0.17 and 0.06, respectively).

CONCLUSIONS

The principle objective of this study is to analyze the relationship between PUV and PUI and personality traits, types of impulsiveness and child-youth behaviour problems in a clinical sample of children and adolescents. PUV is associated with greater Neuroticism; individuals having high scores on this factor tend to experience negative emotions and tend to use the Internet as a means to "feel better" about their everyday problems or unpleasant feelings. As in previous literature[6], our study also found less Openness, less Conscientiousness and less Agreeableness associated with PUV. Also, our results coincide with those from other studies in regards to impulsiveness, finding greater impulsiveness and little reflexivity associated with PUV. As for behaviour problems, the study results fall more in line with the Przybylski study[20] than the Parkes et al. study[22] since our results reveal relations between PUV and behaviour problems, specifically with Thought problems, Attention and Aggressive

Behaviour. In fact, it is currently argued whether or not the high frequency of videogame use may indicate a strategy for coping with difficulties in individuals having emotional disorders, social problems, difficulties in relationships with their parents or academic problems[35].

In regards to the PUI, our study found that it was associated with a lower Openness and lower Agreeableness. Our results may be understood based on the fact that children/adolescents with higher levels of PUI have a deficit of social skills and difficulties in terms of establishing interpersonal relationships, which may lead to their being less open and visibly or externally less friendly. Our results coincide with those of Wang et al.[6] in regards to the Conscientiousness dimension which is negatively associated with PUI. As for Neuroticism and the controversy regarding the distinct results from different studies, our results are in line with those from the Tsai et al. study[9] indicating higher scores for this dimension associated with PUI. Like PUV, PUI is also positively related with impulsiveness, in agreement with prior literature[36]. This is not surprising, given that the Internet offers an environment filled with gratifying constant stimuli and it is also coherent with the opinion that Internet addiction is an alteration associated with difficulties in impulse control. As for behaviour problems, PUI is associated with increased attention problems, rule-breaking behaviour, aggressive behaviour and in general, greater externalizing behaviour problems. Prior studies[37] have found that those individuals who used the Internet for over three hours daily had greater levels of externalizing problems as assessed with the YSR, both on a global scale or broadband, such as the scales of aggressive behaviour, rule breaking and attention problems, as was the case with our results. This increased level of externalizing problems are consistent with other studies in which it has been found that adolescents displaying aggressive behaviours are more likely to use the Internet every day and over 20 hours per week[38]. Internet use has also been found to be associated with attention deficit hyperactivity disorder[39].

It should be noted that both PUV and PUI have not been found to be significantly related to internalizing behaviour problems, despite the fact that some studies have indicated this relationship[40,41]. This may be explained by the fact that the children/adolescents visiting this USM were mainly categorized with externalizing behaviour problems (in 46.6%) as opposed to internalizing behaviour problems (in 20.5%) therefore the variance in the externalizing problems dimension may be limited.

The second objective is to determine the prevalence of PUNT in this Child-Youth USM. The results reveal that 31.8% of the studied sample had moderate PUI and 18.2% had PUV. Overall, the prevalence obtained in other studies[2,3] tends to be lower, between 4.3% and 9% in the general adolescent population. The higher prevalence in this study may be due to the fact that ours is a sample of children and adolescents demanding clinical care, therefore a higher level of behaviour problems, including PUI may be expected. As for the objective of examining the differences in the perceptions of parents and children regarding PUNT, when the parents were the informants, it was found that 20.5% of the children/adolescents had PUI. Despite the fact that there is a moderate congruence between both cases (the children/adolescents and the parents), one of the reasons why the prevalence of PUI is lower when the parents are the informants (as compared to when the children/adolescents are the informants) may be that the Internet addiction test[26] was originally developed as a self-reporting test and was later adapted for use by parents with the same questions. These questions deal with internal thoughts/feelings which are more known to the children/adolescents themselves, as opposed to external individuals (such as parents). The large majority of the studies[42] confirm that males tend to be more associated with both PUI and PUV; in our study, significant differences between genders were only found for PUV, with greater levels of PUV being found in males.

The final objective proposed by this study is to determine how the study variables may be significant predictors of PUNT when collectively considering personality and behaviour problems. Neuroticism and Aggressive Behaviour are significant predictors of both PUI and PUV. Also, Anxiety-depression is a significant predictor of PUV.

It is important to recognize that this study has certain limitations: studies with greater sample sizes may be required in order to increase the statistical power of the tests and the inclusion of longitudinal perspectives may allow us to further examine the prediction of PUI and PUV, taking into account personality and behaviour problems. Patients from the sample were subjected to distinct types of treatments (psychotherapeutic and pharmacological) and, with larger samples (multi-centric studies), it may be possible to determine whether the treatment type affected the prevalence. Also, with multi-centric studies, it is possible to increase the power of the statistical tests and to thereby expand upon the prevalence and manifestations of PUNT in different psychopathological groups, given that significant differences were not found between patients with distinct diagnoses, probably due to the reduced group size. The lack of a control group is another limitation of our study. Although we have been able to compare the results obtained in this clinical sample with those from other studies on the general population, future studies should compare clinical samples and those of the general population in a more systematic manner. However, this study has various practical implications: it suggests the need to pay special attention to PUNT in clinical populations, given its greater prevalence in these groups, as well as the need to be particularly attentive in cases of children/adolescents visiting the clinic with high levels of Neuroticism and

Externalizing Behaviour Problems, clearly associated with PUNT. The association of these personality and behaviour variables suggests similar correlates to the problematic use of drugs; therefore the comorbidity between these pathologies should be considered. Furthermore, given that with PUNT, impulsiveness and the need for sensations play an important role, they should be taken into consideration during the treatment of this problem. In conclusion, PUNT is a problem that emerges as an issue of importance in child/youth clinical settings, and its scope must be determined in the child-youth care departments.

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