Perceived need frustration predicting vulnerable narcissism: a lack of empathy and an inauthentic sense of self as mediators

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Abstract   The aim of the present study was to empirically examine the development of vulnerable narcissism from a perspective based on the self-determination theory (SDT), focusing on the role of intraindividual and interindividual integrated functioning. With this theory in mind, it is hypothesized that need frustration, which is frustration of the needs of autonomy, relatedness and competence, predicts vulnerable narcissism and that this relationship is explained by a lack of empathy and an inauthentic sense of self. 136 non-clinical participants between 18 and 65 completed questionnaires to measure these variables. Results suggest vulnerable narcissism is predicted by need frustration, which is partially mediated by a lack of empathy and an inauthentic sense of self. Explorative analysis of the relationship of the separate needs with the other variables is discussed. In line with the results, mindfulness training is considered as a possible treatment.

Introduction

Narcissism is a subject that has increased attention over the last few decades. This is because the western society seems to be more narcistic than before, as a result of the individualization (Foster, Campbell & Twenge, 2003; Piff, 2014). Unfortunately, the treatment of pathological narcissism is still in an early stage. This is supported by the fact there are no evidence-based guidelines and no randomized-controlled trials that focus on the effectiveness of treatments of pathological narcissism. Instead, narcissism is compared to borderline personality disorder, which has evidence-based treatments (Euler et al., 2018; Cristea et al., 2017). However, the found effects of these treatments are still small (Cristea et al., 2017). Therefore, it is important to keep investigating the development of narcissism, which may lead to new insights for treatment.

Another problem of the treatment of personality disorders is the big dropout rate, which seems to be predicted by narcissism (Gamache, Savard, Lemelin, Côté, & Villeneuve, 2018). An explanation for this could come from the self-determination theory (SDT), which focuses on the resources for motivation. In this research article, the aim is to increase the understanding of narcissism with the help of the SDT.

The self-determination theory

The basic principle of the SDT is the human's intent to strive to personal growth and well-being, with the aim of integrated functioning. Integrated functioning can be intraindividual, also known as unity within the self, and interindividual, also known as unity with others (Ryan & Deci, 2017). Intraindividual integration means an individual relies less on structures and cues from the social environment and more on internal structures and cues, making it possible to form a stable and authentic sense of self. Interindividual integration aims at the transformation of external obligated rules and values into internal, volitional regulations (Ryan, Deci, & Vansteenkiste, 2015). This transformation is based on social interaction and understanding. More specifically, it is based on the ability to share and understand others' thoughts and feelings, which is also the definition of empathy (Allemand, Steiger & Fend, 2015). The development toward integrated functioning depends on the satisfaction of three basic psychological needs, the need of autonomy, relatedness and competence, through guidance by the social environment (Vansteenkiste & Ryan, 2013). These psychological needs are comparable to physical needs, like food and water, making hem necessary nutrients for an optimal growth (Ryan & Deci, 2017).

In brief, autonomy refers to a state in which behavior is volitional and self-endorsed, meaning there is full authorization of one's own actions (Ryan, Soenens, & Vansteenkiste, 2018). Relatedness is based on the human striving to form and maintain a sense of belonging with secure connections with others (Ryan & Deci, 2017). It can be satisfied by the experience of giving and receiving love and care

to or by significant others (Vansteenkiste & Ryan, 2013; Sedikides, Ntoumanis, & Sheldon, 2018). Competence refers to the sense of effectiveness in valued and challenging pursuits, which can be satisfied with enough guidance from the caregiving environment (Vantsteenkiste & Ryan, 2013; Sedikides et al., 2018). The three needs are interdependent, meaning each need facilitates the satisfaction of the others. This makes the satisfaction of all three needs essential for optimal integration and the formation of an authentic sense of self (Ryan & Deci, 2017).

The satisfaction of the needs depends on the sensitivity and responsivity of an individual's caregiving environment as a child and social environment as an adult, aiming at need support (Ryan & Deci, 2017). Need support has in turn associations with well-being, a higher self-esteem and smoother identity development (Chen et al., 2014; Deci et al., 2001; Luyckx, Vansteenkiste, Goossens, & Duriez, 2009).

Basic psychological needs and psychopathology:

In contrary to need satisfaction, need frustration is associated with a controlling parenting style, in which parents pressure their child to do what they want, for instance by physical punishment or conditional regard. With conditional regard, the parents only show love and affection when the child behaves as they please, for instance by appearing attractive and smart (Vansteenkiste & Ryan, 2013). Conditional regard frustrates the psychological needs, because the need for autonomy is pitted against the need for relatedness (Ryan & Deci, 2017). Literature shows need frustration is associated with ill-being, aggressive behavior, depressive symptoms and the development of malfunctioning coping strategies (Chen et al., 2014; Joussemet et al., 2008; Soenens et al., 2008; Unanue, Dittmar, Vignoles, & Vansteenkiste, 2014; Vansteenkiste & Ryan, 2013). Thereby, it seems need frustration is associated more with the development of psychopathology then need satisfaction.

Need frustration can either be need depriving, a passive, indirect way of frustrating the needs, based on low need satisfaction, or need thwarting, an active, hostile way of obstructing the needs. To illustrate, one can feel low relatedness with other students at one's school, which is an example of need depriving, but one can also be actively excluded or bullied by them, which resembles need thwarting. Need thwarting leads to more need frustration than need depriving and thereby has more effect on the development of malfunctioning coping mechanisms and psychopathological disorders (Vansteenkiste & Ryan, 2013).

Basic psychological needs and vulnerable narcissism

One of the disorders linked to need frustration is the narcistic personality disorder (NPD) (Sedikides et al., 2018). This disorder has a common core of contempt for others and inflated self-beliefs, which means narcissists find themselves better and more important than others, show exploitative and manipulative behaviors and have a lack of empathy. Added to that, narcissism is characterized by a

two-dimensional structure with separate interpersonal and psychological correlates (Miller et al., 2014). Grandiose narcissism is linked with extraversion, aggression and self-assurance, whereas vulnerable narcissism is linked with introversion and instable emotions linked with neuroticism, like feelings of distrust, shame and anxiety (Miller, Lynam, Hyatt, & Campbell, 2017). The distinction could also be made regarding self-esteem. Narcissists with a high self-esteem are likely to be grandiose, whereas narcissists with a low self-esteem are likely to be vulnerable (Sedikides et al., 2018).

Within the SDT, it is expected that the inflated self-beliefs and bold interpersonal styles are ways to compensate for underlying shortfalls in the satisfaction of the needs. Within grandiose narcissism, this behavior is expected to be a result of relatedness frustration, because of the core narcistic elements consisting of exploitative and manipulative behaviors and a lack of empathy. The need for autonomy and competence are likely to be met, which shows itself in the high self-esteem and self-assurance. On the other hand, vulnerable narcissism is expected to be predicted by the frustration of all the needs, because of its neurotic base (Miller et al., 2017; Sedikides et al., 2018).

The link between the frustration of the needs and vulnerable narcissism is supported by the literature. Brummelman and Thomaes (2010) found vulnerable narcissism can be predicted by the combination of a permissive parenting style, with few or no guidance of the behavior of the child, and a controlling parenting style (Brummelman & Thomaes, 2010). As mentioned above, these parenting styles are not satisfying the basic psychological needs (Vansteenkiste & Ryan, 2013). More specifically, conditional regard seems to be associated with self-aggrandizement following success and shame and self-devaluation following failure, which are both components of vulnerable narcissism (Assor & Tal, 2012). The link between need thwarting and vulnerable narcissism is also supported by van Buren and Meehan (2015), as they showed that child maltreatment, a form of need thwarting, can predict vulnerable narcissism. Vulnerable narcissism thereby seems to be associated with need frustration.

Lack of empathy and inauthentic functioning as mediators
As mentioned above, integrated functioning is both on an intraindividual and interindividual level. This means that the development of psychopathology, in this case vulnerable narcissism, might be the result of problems on both levels. This assumption is supported by the research of Miklikowska, Duriez and Soenens (2011), who found that perceived parental need support predicted the development of perspective taking and empathic concern. A lack of these empathic skills, in combination with emotional distress of not being able to make a clear distinction between own emotions and the emotions of others, seems to predict vulnerable narcissism (Luchner & Tandleff-Dunn, 2016). It is thereby possible that the relationship between need frustration and vulnerable narcissism is affected by a lack of empathy, which falls within the interindividual level of integration.

This assumption is also supported by van Buren and Meehan (2015), who tried to explain their found connection between child maltreatment and vulnerable narcissism by looking at the role of unfulfilled self-object needs by the parents, what according to the theory of Kohut (1971) will lead to an incomplete self, in combination with shame-proneness. The combination of these two variables fully mediated this relationship (van Buren & Meehan, 2015). This shows the relationship between need frustration and vulnerable narcissism might be affected by the development of an inauthentic sense of self, which falls within the intraindividual level of integration.

The present study

Based on the found literature, two hypotheses have been formulated: First, need frustration is a stronger predictor of vulnerable narcissism, when compared to need satisfaction (1a). Because low need satisfaction, also known as need depriving, is seen as a form of need frustration, it is expected both variables have a positive association with vulnerable narcissism, with need frustration having the strongest predictive value. Within this hypothesis, it is also expected that autonomy frustration, relatedness frustration and competence frustration are unique predictors of vulnerable narcissism (1b). Second, the relationship between need frustration and vulnerable narcissism can be explained by a lack of empathy and an inauthentic sense of self (2). There will also be an explorative part, which focusses on the relationship between the three separate frustrated needs, vulnerable narcissism, the lack of empathy and the inauthentic sense of self.

Method

Software

SPSS Statistics 25 and PROCESS version 3.0 is used to analyze the data (Hayes, 2013).

Participants

The sample of this study consisted of 136 non-clinical participants, with 91 woman and 45 men ($M = .33$, $SD = .47$), ages 20 to 65 ($M = 34.47$, $SD = 14.11$). The participants were recruited on Facebook, Instagram and LinkedIn, with help of the snowball effect. This link was leading the participants to ThesisToolsPro.com, with the introduction and informed consent, followed by the different questionnaires.

Materials:

Need dissatisfaction:

The Dutch version for adults of the *Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)* was used to measure Need Satisfaction and Need Frustration (Chen et al., 2014). The psychometric quality of the BPNSFS found by Chen and colleagues (2014) was confirmed by Campbell and colleagues (2015). The BPNSFS contains 9 items measuring need satisfaction

(Cronbach's alpha (α): .93) and 12 items measuring Need Frustration (α: .88). The three needs are each separately evaluated on its satisfaction or frustration, resulting in a total of 6 subscales: Autonomy Satisfaction (3 items, e.g., I feel that my decisions reflect what I really want, α: .78), Relatedness Satisfaction (3 items, e.g., I feel close and connected with other people who are important to me, α: .81), Competence Satisfaction (3 items, e.g., I feel capable at what I do, α: .85), Autonomy Frustration (4 items, e.g., I feel pressured to do too many things, α: .79), Relatedness Frustration (4 items, e.g., I feel the relationships I have are just superficial, α: .73) and Competence Frustration (4 items, e.g., I feel insecure about my abilities, α: .80). Items 1, 3 and 5 of the Need Satisfaction Scale were deleted, raising the Cronbach's alphas of the satisfaction subscales with .10, .07 and .44. Items were rated on a 5-point Likert scale ranging from 1 'not at all true' to 5 'very true'.

Lack of Empathy:

To measure empathy, the by the authors translated version of the *Affective and Cognitive Measure of Empathy (ACME)* was used (Vachon & Lyam, 2015). It has 36 items, with a 5-point Likert scale ranging from 1 'strongly disagree' to 5 'strongly agree'. It has three subscales: Cognitive Empathy / COG (12 items, e.g., I can tell when someone is afraid), Affective Resonance / RES (12 items, e.g., It makes me feel good to help someone in need) and Affective Dissonance / DIS (14 items, e.g., I love watching people get angry). After the score on the Cognitive Empathy and Affective Resonance items were reversed, a total lack of empathy scale was created, with a higher score indicating more empathic problems (36 items, α: .92). The psychometric quality of the ACME is also confirmed by Vachon and Lyam (2015).

Inauthentic sense of self

The by the authors translated version of the *Authenticity Scale (AS)* is used to assess the authentic sense of self (Wood, Linley, Maltby, Baliousis, & Joseph, 2008). According to Wood and colleagues, the English version of the questionnaire has a sufficient to good reliability and moderate to strong validity. It has 12 items with a 7-point Likert scale ranging from 1 'does not describe me at all' to 7 'describes me very well'. It has three subscales: Accepting External Influence (4 items, e.g., Other people influence me greatly), Self-alienation (4 items, e.g., I feel alienated from myself) and Authentic Living (4 items, e.g., I always stand by what I believe in). After the score on the Authentic Living items was reversed, a total inauthentic sense of self scale was created, with a higher score indicating a less integrated and authentic sense of self (12 items, α: .85).

Vulnerable narcissism

The by the authors translated version of the *Narcistic Vulnerability Scale (NVS)* was used to measure vulnerable narcissism (Crowe et al., 2018). According to Crowe and colleagues, the English version of the questionnaire has a high psychometric quality. It has 11 items (e.g., Ashamed, α: .94) with a 7-

point Likert scale ranging from 1 'not at all' to 7 'extremely'. The participants were asked to indicate to what extent the word describes his or her personality, in general and at that moment. A higher total score indicated more vulnerable narcissism features (Crowe et al., 2018).

Analysis

First, the effects of the background variables age and gender on the other variables are examined with a Multivariate Analysis of Variance (MANOVA) and Pearson correlation analyses. Second, the data is screened on violations of the following statistical assumptions: outliers, linearity, normality of the residuals, homoscedasticity, multicollinearity and autocorrelation. There are no major violations made, except for one outlier in the standardized residuals. Deleting this case would not significantly improve the normality. Therefore, this outlier is not removed.

To find out if need frustration, compared to need satisfaction, is a stronger predictor of vulnerable narcissism, a hierarchical multiple regression analysis is used, with the subscales need frustration and need satisfaction as independent variables and the NVS, ACME and AS as dependent variables. If the subscale need satisfaction, when controlled for need frustration, still significantly predicts vulnerable narcissism, a total need dissatisfaction scale is created, with a higher score indicating more need dissatisfaction. Otherwise, only the subscale need frustration is used for the remaining analyses. Only then, the unique predictive values of autonomy frustration, relatedness frustration and competence frustration are measured by a hierarchical multiple regression analysis.

To check if the relationship between need frustration (or need dissatisfaction) and vulnerable narcissism is mediated by a lack of empathy and an inauthentic sense of self a mediation analysis (model 4) is used. In this analysis, the NVS is the dependent variable, the need frustration subscale or the total need dissatisfaction scale is the independent variable, and the ACME and AS are mediation variables. Before this mediation analysis is executed, multiple single regression analyses are used to establish the predictive values of both the independent variable and the mediation variables.

Within the explorative part, a hierarchical multiple regression analysis is used to determine the separate predictive values of the needs on the NVS, ACME and AS, with Autonomy Frustration, Relatedness Frustration and Competence Frustration as independent variables and the NVS, ACME and AS as dependent variables. With these findings, a mediation model is proposed and checked with a mediation analysis through hierarchical multiple regression analysis. The first analysis has the separate needs as independent variables and the ACME and AS as dependent variables. The second analysis has the separate needs as independent variables and the NVS as dependent variable, which shows the total effect. The last analysis has the separate needs, the ACME and AS as independent variables and the NVS as dependent variables, which shows the direct effect.

Results

Preliminary analyses

The multivariate analysis of variance (MANOVA) indicated a significant effect of gender on need frustration, need satisfaction and the NVS, ACME and AS, $F(1, 134) = 2.80$, $p = .02$. The analyses of variance (ANOVA) of the separate variables did only indicate a significant effect of gender on the ACME (males $M = 72.42$, females $M = 62.18$), $F(1, 134) = 12.33$, $p < .01$. The Pearson correlation analysis between the measured variables and age showed a significant relation between the AS and age, $rs = -.19$, $p = .03$ and need frustration and age, $rs = .22$, $p = .01$. Because of the significant effects, gender and age are included as control variables in the remaining analyses.

The Pearson correlation analysis between the measured variables showed significant correlations between all variables, except between competence frustration and the ACME (Table 1).

Table 1 Mean (M), standard deviation (SD) and Pearson correlation (r) of the measured variables controlled for gender and age

	M *(SD)*	ACME	AS	NVS
ACME	65.57 (16.67)			
AS	34.23 (11.18)	.269**		
NVS	53.22 (22.58)	.349***	.696***	
Need satisfaction	34.23 (5.68)	-.375***	-.468***	-.489***
Need frustration	25.90 (8.32)	.252**	.694***	.663***
Autonomy Frustration	9.94 (3.34)	.186*	.539***	.500***
Relatedness Frustration	6.70 (2.83)	.315***	.524***	.581***
Competence Frustration	9.26 (3.65)	.157	.626***	.598***

Note: ACME = Affective and Cognitive Measure of Empathy, AS = Authenticity Scale, NVS = Narcistic Vulnerability Scale
* p < .05, ** p < .01, *** p < .001

Primary analysis

Need satisfaction did not significantly predict vulnerable narcissism, when controlled for need frustration. This is in contrary to need frustration, which still predict vulnerable narcissism after being controlled for need satisfaction. Specifically, Autonomy Frustration, Relatedness Frustration and Competence Frustration all significantly predict vulnerable narcissism separately, when controlled for each other (table 2).

Table 2 Standardized effect sizes (B) obtained by hierarchical multiple regression of need satisfaction and need frustration on the NVS, controlled for gender and age.

	NVS	
Need satisfaction	.049	
Need frustration	.344***	
Autonomy Frustration		.274**
Relatedness Frustration		.265**

Competence Frustration		.216*

Need frustration also significantly predicts the ACME and AS. Added to that, the ACME and AS both significantly predict the NVS (table 3).

Table 3 Standardized effect sizes (B) obtained by multiple singe regression analysis of the measured variables, controlled for gender and age.

	NVS	ACME	AS
Need frustration	.667***	.231**	.681***
ACME	.348***		
AS	.699***		

Note: ACME = Affective and Cognitive Measure of Empathy, AS = Authenticity Scale, NVS = Narcistic Vulnerability Scale
* p < .05, ** p < .01, *** p < .001

There is a significant total indirect effect of need frustration on the NVS through the ACME and AS, indicating partial mediation, $b = .90$, 95% BCa CI [.5829, 1.2391] (Table 4; Figure 1).

Table 4 Indirect effects (b) obtained by mediation analysis of the ACME and the Authenticity scale on vulnerable narcissism features, controlled for gender and age.

Independent variable	Mediator	Dependent variable	Indirect effect (b)	95% CI [lower, upper]
Need frustration	ACME	NVS	.035	[.0016, .0779]
Need frustration	AS	NVS	.296	[.1819, .4139]

Note: ACME = Affective and Cognitive Measure of Empathy, AS = Authenticity Scale, NVS = Narcistic Vulnerability Scale
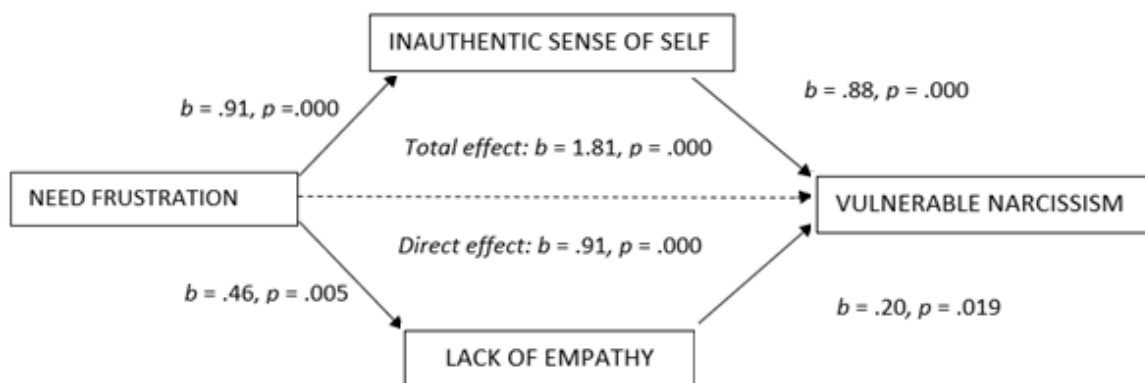

Figure 1: Model of need frustration as a predictor of the NVS, partially mediated by the ACME and AS, controlled for gender and age.
Note: ACME = Affective and Cognitive Measure of Empathy, AS = Authenticity Scale, NVS = Narcistic Vulnerability Scale

Explorative analysis:

Autonomy Frustration, Relatedness Frustration and Competence Frustration significantly predict the NVS as separate variables (Table 5). The ACME is only significantly predicted by Relatedness Frustration, whereas the AS is only significantly predicted by Autonomy Frustration and Competence Frustration. Mediation analysis through hierarchical multiple regression indicate full mediation (Table 6), also illustrated in Figure 2.

Table 5 Standardized effect sizes (b) obtained by hierarchical multiple regression of the measured variables on vulnerable narcissism features, empathic problems and problems with authenticity, controlled for gender and age

	NVS	ACME	AS
Autonomy frustration	.274**	.206	.370***
Relatedness frustration	.265**	.384***	.059
Competence frustration	.216*	-.193	.332***

Note: ACME = Affective and Cognitive Measure of Empathy, AS = Authenticity Scale, NVS = Narcistic Vulnerability Scale
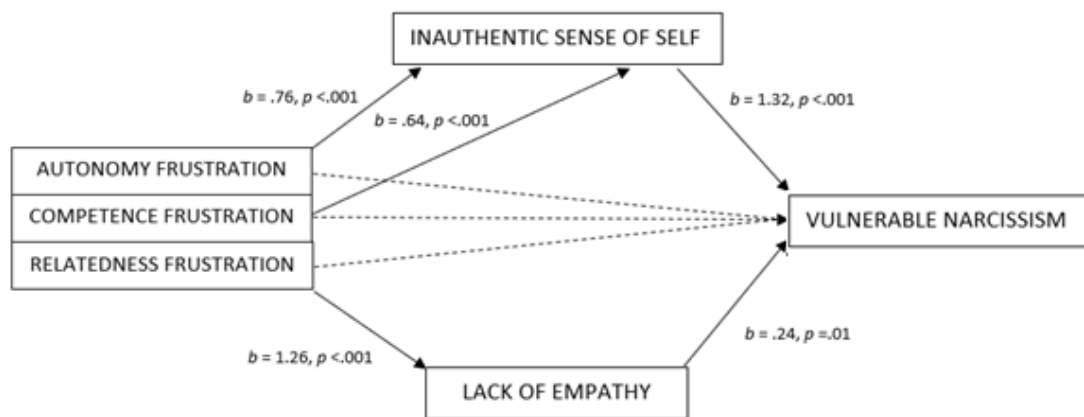* *p < .05, ** p < .01, *** p < .001*

Figure 2: Model of autonomy frustration, competence frustration and relatedness frustration as predictors of the NVS, fully mediated by the ACME and AS, controlled for gender and age.

Table 6 Unstandardized total and direct effect size (b) of the measured variables on features of vulnerable narcissism, obtained by a mediation analysis based on hierarchical multiple regression, controlled for gender and age

	Effect type	Effectsize
Autonomy frustration	Total	1.131**
	Direct	.271
Relatedness frustration	Total	.840*
	Direct	-.364
Competence frustration	Total	1.175**
	Direct	.172

Note: Total effect = without mediation variables, Direct effect = with mediation variables
* *p < .05, ** p < .01, *** p < .001*

Discussion

The aim of the present study was to empirically examine the development of vulnerable narcissism from a perspective of the self-determination theory (SDT; Ryan & Deci, 2017). The SDT states that satisfaction of the needs for autonomy, relatedness and competence is necessary for the development of intra- and interindividual integrated functioning, which in turn is necessary for optimal growth. (Vansteenkiste & Ryan, 2013). Need frustration would thereby lead to a less developed intra- and interindividual integrated functioning, which in turn would lead to psychopathology. The present study examines the difference between need frustration and need satisfaction in their relationship with vulnerable narcissism and its development, through the less developed intra- and interindividual integrated functioning, showed in a lack of empathy and an inauthentic sense of self.

As hypothesized, results suggest that need frustration is a stronger predictor of vulnerable narcissism, when compared to need satisfaction. Therefore, the by the literature made difference between low need satisfaction and need frustration is supported by the present study. The separate frustrated needs are also unique, significant predictors of vulnerable narcissism, confirming the expectation made in the theoretical article of Sedikides, Ntoumanis & Sheldon (2018).

The results also partially confirm the expectation that a lack of empathy and an inauthentic sense of self explain the relationship between need frustration and vulnerable narcissism, as it shows a partial mediation. This could be explained by the relatively low predictive values concerning the lack of empathy as an explanatory variable. Although the early development of empathy sets ground to adult communication skills and social integration, which are both needed to understand the obligated rules and values by the social environment, it may not mean integration of these obligations (Allemand et al., 2014).

It is also possible the separate frustrated needs have different predictive values of the lack of empathy. The idea that Relatedness Frustration has a bigger impact on the development of empathy then the frustration of the needs of autonomy and competence can be substantiated. Relatedness Satisfaction is namely partially based on the experience of receiving love and care, giving the individual the right example of showing empathy (Ryan & Deci, 2017). When this need is frustrated, this example does not exist, meaning the development of empathic skills may be obstructed. This is supported by the results of the explorative part, which show that the relationship between Relatedness Frustration and vulnerable narcissism is explained by the lack of empathy, whereas the relationship with Autonomy Frustration and Competence Frustration is explained by an inauthentic sense of self.

That the results of the explorative part suggest the inauthentic sense of self did not explain the relationship between Relatedness Frustration and vulnerable narcissism may be explained by the subscale Accepting External Influence of the Authenticity Scale, which focusses on the degree of influence others have on the individual's behaviors, feelings and thoughts. When the influence of

others is high, the individuals' sense of self is less authentic. However, the compliance to that influence might lead to the satisfaction of the need for relatedness. This can be explained by the similarity effect, which states people are most attracted to others who share similar attitudes, behaviors and beliefs (Berscheid & Walster 1969; Byrne 1971). Complying to the influence of others might thereby lead to similarity and thereby also to more social inclusion.

Clinical implications

As mentioned above, the big dropout rate within treatments of personality disorders seems to have a connection with vulnerable narcissism (Gamache et al., 2018). This could be explained by the results of the present study, which suggest vulnerable narcissists have interpersonal problems, like a lack of empathy, which seems to be the result of Relatedness Frustration. This means vulnerable narcissist might not have the best social support when going into treatment. In the meta-analysis of DiMatteo (2004), which focused on social support to medical treatment, there was a positive relationship found between social support and adherence and a negative association between social dysfunction and poor outpatient psychiatric follow-up (DiMatteo, 2004). Added to that, Kruse, Rohland & Wu (2002) found that nonattendance was predicted by poorer family support. This means that within the treatment, it is important to focus on Relatedness Satisfaction and empathic skills, helping the client to establish and hold on to meaningful relationships, which in turn can provide social support, increasing the Relatedness Satisfaction in the outside world.

The results of the present study also suggest the treatment of vulnerable narcissism should focus on the establishment of an authentic sense of self. A possible way to establish this is with the help of mindfulness, which seems to have a positive relationship with authentic functioning (Leroy, Anseel, Dimitrova, & Sels, 2013) and empathy (van der Riet, Levett-Jones, & Aquino-Russell, 2018). Mindfulness can be defined as a level of awareness and non-judgmental attention to internal (e.g., emotions) and external (e.g., sounds) present-moment experiences, states and events. By enhancing the internal awareness of the individual, higher levels of authentic functioning are generated (Brown & Ryan, 2003). More research is needed to establish the results mindfulness has on vulnerable narcissism. However, mindfulness seems to lower the negative emotional reactivity associated with neuroticism, which is according to Miller and colleagues (2017) linked to vulnerable narcissism (Barnhofer, Duggan, & Griffith, 2011; Miller et al., 2017; Wenzel, von Versen, Hirschmüller, & Kubiak, 2015).

Limitations and future research

The found results should be interpreted with caution, because of the limitations of this study. First, data was collected with help of the snowball effect, which means it doesn't necessarily represent the whole population. Future research could benefit from a non-selective sample of the Dutch population.

Second, only self-report data was used, which means the results are based on the honesty of the participants and the way these participants see themselves, which is not necessarily the truth. As mentioned in the introduction, individuals with vulnerable narcissism think they are better than others. This could influence the way they fill in a questionnaire about their abilities, because they might not see their own flaws or might not want to let other people know they have flaws. This last bias also implies to individuals without narcistic traits, called social desirability. The introspective ability of an individual also influences the data. When an individual doesn't have this ability, the answers don't represent the reality. Last, there was also no control over the amount of attention participants payed to the questionnaire, because the questionnaires were online. This might limit the ability to generalize this study.

The fact that the conclusions of the present study are only based on self-report data also limits the ability to make conclusions about the development of vulnerable narcissism. Future research should thereby focus on the findings of this present study within a longnitudal design. Because it is still unclear what the effects of mindfulness are on vulnerable narcissism, this could also be a subject of future research.

Conclusion

With the aim of understanding the vulnerable narcissism with the help of the SDT, the present study presented renewing empirical insights in the development of this disorder. Results show that basic psychological need frustration predicts features of vulnerable narcissism, which is partially explained by a lack of empathy and an inauthentic sense of self. Present study advices to focus on basic psychological need satisfaction, with the help of mindfulness training to establish more empathy and authenticity. Hopefully, this advise will lead to a lower drop-out rate and more adequate selection of interventions. Concluding, the results of the present study support the self-determination theory within the development of vulnerable narcissism.

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