



RELATIONSHIP BETWEEN VULNERABLE NARCISSISM, PATHOLOGICAL ALTRUISM AND CODEPENDENCY IN YOUNG ADULTS

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Abstract

This study examines the interplay between vulnerable narcissism, pathological altruism, and codependency among young adults, while also addressing gender differences in these variables. Utilizing a correlational research design, a sample of 400 students aged 18-25 from Forman Christian College University was analyzed. Data collection involved demographic questionnaires and surveys, including the Maladaptive Covert Narcissism Scale, the Pathological Altruism questionnaire, and the Spann-Fischer Codependency Scale, all demonstrating strong reliability. The analysis employed Pearson product-moment correlation coefficients and hierarchical regression to assess relationships and predictive significance, alongside independent t-tests to evaluate gender disparities. Results indicated significant positive correlations among all three variables, with vulnerable narcissism and pathological altruism being strong predictors of codependency. Additionally, findings revealed that women exhibited higher levels of codependency compared to men. The study concludes with notable findings and recommendations for future research, emphasizing the implications of these relationships in understanding young adult behaviours.

Keywords: *Pathological Altruism; Vulnerable Narcissism; Codependency; Young Adults; Pakistan*

1. INTRODUCTION

Various associations have been made between pathological altruism, vulnerable narcissism and codependency before (Oakley et al., 2012; Kaufman & Jauk, 2020; Bachner-Melman & Oakley, 2016; Oakley & McGrath, 2011, 2012; Farmer, 1999), however, the nature and direction of the relationship between the three variables are yet unclear due to scarcity of empirical studies as per the knowledge of the researcher. The primary purpose of the present research is to study the relationship between vulnerable narcissism, pathological altruism, and codependency in young adults.

Vulnerable Narcissism

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Havelock Ellis, the first psychoanalyst called Narcissus's condition to be that of "auto-eroticism" (being one's own sexual object), and then Freud (1905) named it "ego-libido" (self-love) and interchanged it with "narcissistic libido" (1953) in his theory of sexuality. However, it was Ernest Jones (1913), according to Konrath (2007) who construed narcissism as a character trait by calling it the "God-complex". Jones described these people as "aloof, inaccessible, self-admiring, self-important, overconfident, auto-erotic, and exhibitionistic, with fantasies of omnipotence and omniscience" (1913). After Jones's research back in 1913, Horney (1939) developed narcissism into having many "divergent" traits. Wink (1991) distributed narcissism into two types: Vulnerable-Sensitivity (covert narcissism) and Grandiosity-Exhibitionism (overt narcissism). In a 2013 study by Miller et al. the traits of "negative affectivity, detachment, disinhibition, and psychoticism" were significantly correlated with vulnerable narcissism. Miller and Maples (2011) discuss trait personality models of vulnerable narcissism in an important handbook collection on the NPD. They mention Cian et al. (2008)'s list of terms associated with vulnerable narcissism, which consists of words like: "craving, contract-shunning, covert, thin-skinned, hypervigilant, shy".

Pathological Altruism

Oakley et al. (2012) introduce pathological altruism as any behaviour or tendency where the aim or motivation to help others has irrational negative consequences for others and the self, which one can reasonably foresee. It's anyone who engages sincerely in altruistic acts but ends up harming the person or people they had initially set out to help unconsciously or in an unanticipated fashion. They end up becoming victims of this irrationality due to their supposedly altruistic aims. Pathological altruism is also explained in the study by saying that while altruism is the good side of human nature, pathological altruism is the dark side. Homant & Kennedy (2012) characterized pathological altruism as a form of "maladaptive altruism", and determined heuristics that may be real instances of pathological altruism. Pathological altruism had only been seen from a psychoanalytic lens, until Oakley et al. (2012) worked on this phenomenon by incorporating various perspectives, fields, approaches and viewpoints. Altruism's pathologies may be related to a lot of conditions, like the selflessness of eating-disordered people which Rachel Bachner-Melman explores (2012). According to Rachel, individuals with eating disorders also sacrifice their own needs and deprive themselves to devote themselves to others. This is caused by cultural environments, families, interpersonal relationships and genetic factors. Pathological altruism is also highly relevant to a lot of other conditions in our daily lives. For example, Klimecki and Singer (2012) have worked on 'empathic distress fatigue', commonly and wrongfully known as 'compassion fatigue' where they worked to find how empathy leads to distress. The study does not make connections directly but it can be seen how compassion fatigue may be a form of pathological altruism since it becomes harmful to ourselves. O'Connor et al. (2012) researched empathy-based pathogenic guilt, saying how this guilt can become pathogenic when it's based on the false belief that, once compared, one's happiness and success are a source of

unhappiness for others. This pathogenic guilt, the research mentions, leads to pathological altruism by harming oneself and others.

Codependency

Codependency has been thought to originate from families that have a dependence on their relationships (Knudson & Terrell, 2012), whether the families have substance abuse issues, sexual abuse or certain chronic illnesses. However, Beattie lists codependency's characteristics with the following terms: "caretaking, low self-worth, repression, obsession, controlling, denial, dependency, poor communication, weak boundaries, lack of trust, anger" and a few more. Springer et al. (1988) attempted to clarify the construct by defining it as an unhealthy devotion to any relationship that can cost a codependent person's personal and psychological needs. Codependency also entails difficulty establishing intimate relationships (Woititz, 1983), feelings of loss of identity and an addiction to love when it comes to intimate relationships (Hogg & Frank, 1992) and factors like anxiety, boundary distortions, hypervigilance and excessive reliance on denial (Cermak & Brown, 1982) or as Smalley (1984) puts it, "a drive toward constant external validation". Oakley & McGrath (2012) define codependency as "an inability to end a dysfunctional relationship" which leads to a dysfunctional empathetic response. Dear et al. (2004)'s systematic analysis of the main definitions of codependency found four consistent elements: external focusing, self-sacrifice, interpersonal conflict and control, and emotional constraint. In one of the first qualitative interpretative phenomenological analyses (IPA) examining the experience of codependency, four main themes emerged: lack of sense of self, codependency feeling real and tangible, sense of abandonment and control and emotional and occupational imbalances (Bacon et al., 2020).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

Understanding pathological altruism through different perspectives of psychology and social lenses will clarify its relationship to personality and traits, hereby explaining this distinct pathological human behaviour. Additionally, due to its associations with narcissism, especially vulnerable narcissism (Kaufman & Jauk, 2020), it is imperative to study if this phenomenon leads to narcissistic traits of vulnerability to affect it. It is crucial to understand how to control and understand at what point altruism can turn pathological for someone. The present thesis aims to clarify the connections between the three variables, it will help other researchers develop clinical implications of pathological behaviour and underline how it can be navigated in a healthier, careful way for mental health studies and for people who are pathologically altruistic, vulnerably narcissistic and codependent.

2.2. HYPOTHESES

1. There is a positive correlation between vulnerable narcissism and pathological altruism, vulnerable narcissism and codependency and pathological narcissism and codependency.

2. Pathological altruism and vulnerable narcissism will predict codependency in young adults.

3. There is a gender difference in pathological altruism, vulnerable narcissism and codependency.

3. METHOD

A quantitative correlational design was implemented with a non-random sampling methodology based on ease of access i.e. convenient sampling. The population included FCCU's undergraduate students in Lahore, Pakistan. The sample size was $N = 400$, with (50%) women, and (50%) men, with a mean age range of 18-25 at $M = 21.4$. Their education level included fresher students (17.3%), sophomores (20.3%), juniors (26.5%) and seniors (38%). The students were reached out with the goal of putting in a conscious effort to reach diverse majors and fields.

Other than the demographics questionnaire, three standardized psychometric scales were given to volunteering participants in hard copies after gaining permission from their authors.

Pathological Altruism Scale constructed by Scott Barry Kaufman and Emanuel Jauk by connecting closely-related conceptual measures of pathological altruism and unhealthy selfishness. Since the focus of research was only on pathological altruism, only the 10-item PA scale was used. The variance was significant as well and proved to be significant for all 10 items ($p < 0.001$). The Maladaptive Covert Narcissism Scale (Cheek et al., 2013), a 23-item scale, was developed by Jonathan M Cheek, Holly M. Hendin and Paul Wink, mainly to improve the reliability and item content of the more popularly known 10-item Hypersensitive Narcissism Scale (HSNS) that Hendin and Cheek developed in 1997. The Spann-Fischer Codependency Scale (SF CDS) was constructed by Fischer et al. (1991). This is a 16-item scale, which showed a test-retest correlation of 0.87, and an internal consistency Cronbach's alpha of 0.86. The scale is reverse-coded for 2 items, with higher scores meaning greater codependency. It is rated on a 6-point Likert scale with 1 being "Strongly Disagree" to 6 being "Strongly Agree."

Permission was sought from the authors of the three survey instruments to be used in this thesis. The study procedure began by first gaining permission from the Institutional Review Board (IRB) and Ethical Review Committee (ERC). After approvals, a pilot study was conducted with 10% of the sample, $N = 30$, consisting of 15 women and 15 men to estimate the average required time for the administration of scales and whether the participants find the language comfortable and easy enough to decipher. Important feedback included formatting issues which were fixed. The ethical standards of the American Psychological Association (2017) were followed throughout the study.

4. RESULTS

Descriptive Analysis

Table 2. Demographic Characteristics of Sample (N=400)

Sample Characteristics	n	(%)	M	SD
Gender				
Girls	200	50		
Boys	200	50		
Age				
18-25			21.40	1.57
Educational Level				
Fresher Year	69	17.3		
Sophomore	81	20.3		
Junior	106	26.5		
Senior	144	36		
Major				
Education	2	0.5		
Humanities	16	4		
Social Sciences	213	53.25		
Natural Sciences	16	4		
Computer Sciences	87	21.8		
Management	56	14		
Pharmacy	5	1.25		
Undecided	5	1.3		

Note. n = frequency, % = percentage

Table 2 shows 50% women and 50% men, with the age range of 18-25 taken to include young adults only. In terms of the education level, 36% of the population turned out to be seniors whereas 20% were sophomores. Most of the sample belonged to the social sciences category (53%) in terms of major subjects.

Inferential Analysis and Testing of Main Hypotheses

Hypothesis 1: There is a positive correlation between vulnerable narcissism and pathological altruism, vulnerable narcissism and codependency and pathological narcissism and codependency.

Table 3. Pearson product-moment correlation coefficient for PA, SFCDS and MCNS (N=400)

Variables	N	M	SD	PA	SFCDS	MCNS
PA	400	31.96	6.64	–		
SFCDS	400	60.14	11.72	.659**	–	
MCNS	400	70.16	13.92	.450**	.580**	–

Note. PA = Pathological Altruism, SFCDS = Codependency, MCNS = Vulnerable Narcissism

** . Correlation is significant at the 0.01 level (p < .01)

A Pearson product-moment correlation coefficient was computed to assess the relationship between vulnerable narcissism and pathological altruism, vulnerable narcissism and codependency and pathological narcissism and codependency. Pearson correlation between pathological altruism and codependency was found to be positive and statistically significant ($r=.659$, $p <.01$), between pathological altruism and vulnerable narcissism was found to be positive and statistically significant ($r=.450$, $p<.01$), between vulnerable narcissism and codependency was found to be positive and statistically significant too ($r=.580$, $p<.01$). In terms of strength, it is noted how the correlation between pathological altruism and codependency is the strongest with ($r = .659$, $p <.01$), the second strongest correlation was between vulnerable narcissism and codependency with ($r = .580$, $p <.01$), and the least strong correlation between vulnerable narcissism and pathological altruism ($r = .450$, $p <.01$). Hence, H1 was supported; there was a strong correlation between all the variables. Any increases in pathological altruism were correlated with increases in vulnerable narcissism and codependency. Any increases in vulnerable narcissism were correlated with increases in pathological altruism and codependency. Any increases in codependency were correlated with increases in pathological altruism and vulnerable narcissism. The key finding for the correlation found between the variables stated that there was a fairly strong positive and statistically significant correlation between vulnerable narcissism, pathological altruism and codependency. In the previous research, it is indicated how there are associations between the variables, but no assumptions could be made that provide which relationship is the strongest. This study provided results indicating that the correlation between pathological altruism and codependency was the strongest, with the second strongest correlation made between vulnerable narcissism and codependency and the least strong correlation was found between vulnerable narcissism and pathological altruism. It is worth mentioning how codependency relating to pathological altruism and to vulnerable narcissism led to the two stronger correlations, however, this is speculative until a mediation or moderation research can confirm this in a future research. In terms of behaviour, if an individual suffers from pathological altruism, they might show signs of excessive self-sacrifice (Oakley, 2012), dependent personality disorder, maladaptive agreeableness (Widiger & Pressnall, 2012), empathic distress fatigue (Klimecki & Singer, 2012) and empathy-based pathogenic guilt (O'Connor et al., 2012). Oakley et al. (2012) did previously find how someone's altruistic intentions perform the harmful deed of codependency, and in a previous study, they also mentioned how codependency can be a form of pathological altruism. There is a definite need to address what specific types of behaviour are prevalent in people experiencing pathological altruism to uncover specific traits that can be described as common.

Hypothesis 2: Pathological altruism and vulnerable narcissism will predict codependency in young adults.

Table 4. Hierarchical Regression Results for Codependency

Variable	B	95%CI		SE B	β	R^2	ΔR^2
		LL	UL				
Step 1						.43	.43***
Constant	29.99***	18.72	27.25	2.17			
Pathological Altruism	1.16***	1.03	1.29	0.06	.65***		
Step 2						.53	.10***
Constant	11.00***	6.37	15.63	2.35			
Pathological Altruism	0.88***	0.74	1.01	0.06	.49***		
Vulnerable Narcissism	0.30***	0.23	0.36	0.03	.35***		

Note. B = Unstandardized Beta, β = Standardized Beta, SE = Coefficient Standard Error, CI = Confidence Interval

*** $p < .001$

Table 4 shows the hierarchical regression analysis performed to find the impact of pathological altruism and vulnerable narcissism on codependency. In Step 1, the R^2 value of .43 revealed that pathological altruism explains 43% variance in codependency with $F(1, 398) = 305.76, p < .001$. The findings revealed that pathological altruism strongly and positively predicted codependency ($\beta = .65, p < .001$). In Step 2, the R^2 value of .53 revealed that pathological altruism and vulnerable narcissism both explained 53% variance in codependency with $F(2, 397) = 228.59, p < .001$. The findings revealed that codependency ($\beta = .49, p < .001$) and vulnerable narcissism ($\beta = .35, p < .001$) positively and strongly predicted codependency. The ΔR^2 value of .10 revealed 10% change in the variance of model 1 and model 2 with $\Delta F(1, 397) = 86.07, p < .001$. Both pathological altruism and vulnerable narcissism predictors showed positive and statistically strong predictive relationships with codependency. Codependency has shown associations with pathological altruism before when Oakley and McGrath (2012) stated how the two variables share roots with each other and how codependency may be a form of pathological altruism. Oakley et al. (2012) found that codependency is committed with altruistic intentions while Rosenberg states how passive codependents avoid conflict by dissociating from their anger by being empathetic and kind. However, no predictions were made earlier as to how pathological altruism can predict codependency, which the present study finds to be a strong prediction. In the context of vulnerable narcissism and codependency, there is little empirical data. Rossiter (2004) has found how narcissistic personality disorder, if termed in a feminist manifestation, can help understand codependency. This comes from a woman surrendering her own needs and presenting their “false self”, looking to search self-development resources in other people and places rather than themselves, which is a narcissistic tendency. Moreover, codependents have behaviors that show subtle narcissism entitlements (Farmer, 1999). However, it wasn't clear before this present study, on how strongly vulnerable narcissism can cause codependency, which is a significantly strong prediction.

Hypothesis 3: There is a gender difference in pathological altruism, vulnerable narcissism and codependency.

Table 5. Mean, Standard Deviation, *t* and *p* Values, and Cohen's *d* Values of Boys and Girls

Variables	Boys (<i>n</i> =200)		Girls (<i>n</i> =200)		<i>t</i>	<i>P</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
<i>PA</i>	31.49	6.27	32.43	6.98	1.416	.15	0.141
<i>SFCDS</i>	58.49	11.68	61.79	11.55	2.844	.005	0.284
<i>MCNS</i>	70.42	13.82	69.90	14.04	-.373	.709	0.037

Note. PA = Pathological Altruism, SFCDS = Codependency, MCNS = Vulnerable Narcissism

The independent-sample *t*-test was conducted to compare pathological altruism, vulnerable narcissism and codependency for boys and girls. There was a significant difference $t(398) = 2.84$, $p < .05$ in the codependency scores with the mean score for boys ($M = 58.49$, $SD = 11.69$) lower than girls ($M = 61.79$, $SD = 11.55$). The mean difference was 3.3, showing girls are likely to be more codependent than boys. Codependency's Cohen's *d* was 0.28, which means there was a small effect or magnitude difference in the gender. There were no significant differences $t(398) = 1.41$, $p > .05$ in pathological altruism scores for boys ($M = 31.49$, $SD = 6.27$) and girls ($M = 32.43$, $SD = 6.98$), as well as no statistical difference $t(398) = -.37$, $p > .05$ in the vulnerable narcissism scores for boys ($M = 70.42$, $SD = 13.82$) and girls ($M = 70$, $SD = 14.04$). Thus, a significant difference was found in gender in terms of codependency, however, there were no significant gender differences found when it came to pathological altruism and vulnerable narcissism. This falls in line with previous research into codependency in terms of women having higher scores in codependency than men (Irvine, 1995; Hands & Dear, 1994; Dear & Roberts, 2002; Cullen & Car, 1999). As far as the gender differences are concerned in previous research, it makes sense that women are more codependent with their caregiving, nurturing, self-sacrifice and compromise, which is also culturally promoted as the norm in women. Women also tend to rely on other people for approval more than men do (Dear & Roberts, 2002). It can also be explained with Rossiter's research (2004) saying codependency can be understood via a feminist manifestation of the narcissistic personality disorder, indicating how women score higher in both codependency and vulnerable narcissism. As far as vulnerable narcissism is concerned, previous research (Besser & Priel, 2010; Miller et al., 2010; Onofrei, 2009; Pincus et al., (2009); Wright et al., 2010) do show women had higher scores than men. However, the present study showed a statistically non-significant result and the least effect size in terms of vulnerable narcissism gender differences if compared to the rest of the variables. It does fall in line with Grijalva et al. (2015)'s study when they found men and women did not differ in vulnerable narcissism. More research is needed into what may cause some cultures to have fewer differences in gender when it comes to

vulnerable narcissism, since one possibility may be the difference between Western and Eastern cultures in narcissism, especially vulnerable narcissism.

5. CONCLUSIONS

The present research adds to the literature in Pakistani psychological studies by finding statistically significant correlations between vulnerable narcissism, pathological altruism and codependency in young adults. While significant gender differences were not found in vulnerable narcissism and pathological altruism, codependency did reveal a statistically significant difference. This is hereby an important finding in terms of the Pakistani context, where further research can explore the reason for minimal differences in the rest of the world and in Pakistan. A deeper research is needed into all three variables individually too, with the aim of identifying what traits are most critical to mitigate. A similar study in Pakistan could also help test the test-retest reliability, aiding to the theoretical model and strength.

REFERENCES

- American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>
- Bachner-Melman, R., & Oakley, B. (2016). Giving ‘Til It Hurts’: eating disorders and pathological altruism. In *Springer eBooks* (pp. 91–103). https://doi.org/10.1007/978-3-319-32742-6_7
- Bachner-Melman, R. (2011). The relevance of pathological altruism to eating disorders. In *Oxford University Press eBooks* (pp. 95–106). <https://doi.org/10.1093/acprof:oso/9780199738571.003.0075>
- Bacon, I., McKay, E., Reynolds, F., & McIntyre, A. (2018). The Lived Experience of Codependency: an Interpretative Phenomenological Analysis. *International Journal of Mental Health and Addiction*, 18(3), 754–771. <https://doi.org/10.1007/s11469-018-9983-8>
- Beattie, M. (1987). Codependent No More. Minnesota: Hazelden Foundation
- Cermak, T. L., & Brown, S. (1982). Interactional Group Therapy with the Adult Children of Alcoholics. *International Journal of Group Psychotherapy*, 32(3), 375–389. <https://doi.org/10.1080/00207284.1982.11492060>
- Cullen, J. and Carr, A. (1999) Codependency: An Empirical Study from a Systemic Perspective. *Contemporary Family Therapy*, 21(4), pp. 505-526. <https://doi.org/10.1023/A:1021627205565>
- Dear, G. E., & Roberts, C. M. (2002). The relationships between codependency and femininity and masculinity. *Sex roles*, 46, 159-165. <https://doi.org/10.1023/A:1019661702408>
- Dear, G. E., Roberts, C., & Lange, L. (2004). Defining codependency: a thematic analysis of published definitions. In S. Shohov (Ed.), *Advances in Psychology*, Vol. 34, pp. 189–205, New York, NY: Nova Science Publishers.
- Farmer, S. A. (1999). Entitlement in codependency. *Journal of Addictive Diseases*, 18(3), 55–68. https://doi.org/10.1300/j069v18n03_06
- Fischer, J. L., & Spann, L. (1991). Measuring codependency. *Alcoholism Treatment Quarterly*, 8(1), 87–100. https://doi.org/10.1300/j020v08n01_06

- Freud, Sigmund (1962). Three Essays on the Theory of Sexuality, trans. James Strachey. New York: Basic Books
- Grijalva, E., Newman, D. A., Tay, L., Donnellan, M. B., Harms, P. D., Robins, R. W., & Yan, T. (2015). Gender differences in narcissism: A meta-analytic review. *Psychological Bulletin*, 141(2), 261–310. <https://doi.org/10.1037/a0038231>
- Hogg, J. A., & Frank, M. L. (1992). Toward an interpersonal model of codependence and contradependence. *Journal of Counseling & Development*, 70(3), 371–375. <https://doi.org/10.1002/j.1556-6676.1992.tb01618.x>
- Horney, K. (2013). New ways in psychoanalysis. In *Routledge eBooks*. <https://doi.org/10.4324/9781315010540>
- Irvine, L. J. (1995). Codependency and Recovery: Gender, Self, and Emotions in Popular Self-Help. *Symbolic Interaction*, 18(2), 145–163. <https://doi.org/10.1525/si.1995.18.2.145>
- Jones, E. (1913/1951) Essays in applied psychoanalysis, Vol II: Essays in folklore, anthropology, and religion. Hogarth Press Ltd: London. <https://archive.org/details/essaysinappliedp032204mbp>
- Kaufman, S. B., & Jauk, E. (2020). Healthy selfishness and pathological altruism: measuring two paradoxical forms of selfishness. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01006>
- Klimecki, O., & Singer, T. (2011). Empathic Distress Fatigue Rather Than Compassion Fatigue? Integrating Findings from Empathy Research in Psychology and Social Neuroscience. In *Oxford University Press eBooks* (pp. 369–383). <https://doi.org/10.1093/acprof:oso/9780199738571.003.0253>
- McGrath, M., & Oakley, B. (2011). Codependency and pathological altruism. In *Oxford University Press eBooks* (pp. 50–74). <https://doi.org/10.1093/acprof:oso/9780199738571.003.0045>
- Miller, J. D., & Maples, J. (2011). Trait personality models of narcissistic personality disorder, grandiose narcissism, and vulnerable narcissism. *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments*, 71-88. <https://doi.org/10.1002/9781118093108.ch7>
- Miller, J. D., Dir, A., Gentile, B., Wilson, L., Pryor, L. R., & Campbell, W. K. (2010). Searching for a Vulnerable Dark triad: comparing Factor 2 psychopathy, vulnerable narcissism, and borderline Personality disorder. *Journal of Personality*, 78(5), 1529–1564. <https://doi.org/10.1111/j.1467-6494.2010.00660.x>
- Miller, J. D., Gentile, B., Wilson, L., & Campbell, W. K. (2013). Grandiose and Vulnerable Narcissism and the DSM–5 Pathological Personality Trait model. *Journal of Personality Assessment*, 95(3), 284–290. <https://doi.org/10.1080/00223891.2012.685907>
- Oakley, B., Knafo, A., Madhavan, G., & Wilson, D. S. (Eds.). (2012). *Pathological altruism*. Oxford University Press.
- Oakley, B. A. (2013). Concepts and implications of altruism bias and pathological altruism. *Proceedings of the National Academy of Sciences*, 110(supplement_2), 10408–10415. <https://doi.org/10.1073/pnas.1302547110>
- Onofrei, L. (2009). A critical examination of the theoretical and empirical overlap between overt narcissism and male narcissism and between covert narcissism and female narcissism. (Theses, Dissertations, and Projects. Paper 1133).
- O'Connor, L. E., Berry, J. W., Lewis, T. B., & Stiver, D. J. (2011). Empathy-Based pathogenic guilt, pathological altruism, and psychopathology. In *Oxford University Press eBooks* (pp. 11–30). <https://doi.org/10.1093/acprof:oso/9780199738571.003.0024>

- Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment, 21*(3), 365–379. <https://doi.org/10.1037/a0016530>
- Raihani, N. J., & Power, E. A. (2021). No good deed goes unpunished: the social costs of prosocial behaviour. *Evolutionary Human Sciences, 3*. <https://doi.org/10.1017/ehs.2021.35>
- Rosenberg, R. (2021). Codependency Personality Types. Self-Love Recovery Institute; Self-Love Recovery Institute. <https://www.selfloverecover.com/blogs/blog/codependency-types>
- Rossiter, S. K. (n.d.). *Narcissism and codependency - ProQuest*. <https://www.proquest.com/openview/088b101209c62a1ad306e443b096bfe4/1?cbl=18750&diss=y&pq-origsite=gscholar&parentSessionId=Utc110yQ9yRsR8lySjknThwUr6WhDK16ik%2Ba%2FfJ01V4%3D>
- Smalley, S. (1984) Treating co-dependency: shifting the focus to individual autonomy. *Focus on Family*. November/December 13-14.
- Springer, C. A., Britt, T. W., & Schlenker, B. R. (1998). Codependency: Clarifying the construct. *Journal of Mental Health Counseling, 20*(2), 141-158. <https://www.proquest.com/scholarly-journals/codependency-clarifying-construct/docview/198715631/se-2>
- Twenge, J. M., Konrath, S., Foster, J. D., Campbell, W. K., & Bushman, B. J. (2008). Egos Inflating Over Time: A Cross-Temporal Meta-Analysis of the narcissistic personality inventory. *Journal of Personality, 76*(4), 875–902. <https://doi.org/10.1111/j.1467-6494.2008.00507.x>
- Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology, 61*, 590-597. <https://doi.org/10.1037/0022-3514.61.4.590>
- Woititz, J. (1983). *Adult Children of Alcoholics*. Pompano Beach, FL: Heath Communications
- Wright, A. G. C., Lukowitsky, M. R., Pincus, A. L., & Conroy, D. E. (2010). The higher order factor structure and gender invariance of the pathological narcissism inventory. *Assessment, 17*(4), 467–483. <https://doi.org/10.1177/1073191110373227>
- Zhang, Z. (2016). Missing data imputation: focusing on single imputation. *PubMed, 4*(1), 9. <https://doi.org/10.3978/j.issn.2305-5839.2015.12.38>

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