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Anorexia Nervosa: Divergent Validity of a Prototype Narrative

Anorexia Nerviosa:Validez Divergente de un Prototipo de Narrativa

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Abstract

The objective of this paper was to test the divergent validity (degree of discrimination) of an anorectic prototype narrative (i.e., communality of themes in the individuals' core auto-biographical memories), as well as explore different characteristics of the participants which may be associated with the degree of prototype discrimination. Seventy participants diagnosed with anorexia nervosa participated in the study and were asked to indicate their degree of identification with four different narrative prototypes (depressive, agoraphobia, anorexic, alcoholic and drug addiction prototypes). Results did not confirm the divergent validity of the anorexic prototype narrative. Participants tended to identify primarily with the depressive prototype narrative. No significant differences were found between levels of identification with the anorexic prototype and depression, or agoraphobia and alcoholism prototype. The only significant difference found was between the anorexic and drug addiction prototype. However, severity and duration of the clinical condition were found to be associated with the degree of identification of prototype narrative. Results are discussed in terms of a transdiagnostic versus a prototype approach to the eating disorders psychopathology.

Keywords: Narratives, psychopathology, prototype narrative, anorexia, divergent validity

Resumen

El objetivo de éste artículo es tanto poner a prueba la validez divergente (grado de discrimnación) de un prototipo de narrativa anoréxica (por ejemplo, conjunto de temáticas ligadas a la memoria que resultan centrales a la autobiografía de los individuos), como explorar las diferentes características de los participantes que podrían estar asociadas al grado de discriminación prototípica. Participaron en el estudio setenta pacientes diagnosticadas con anorexia nerviosa. Se les consultó que indicaran su grado de identificaciópn con cuatro diferentes prototipos de narrativa (prototipos depresivo, agorafóbico, anoréxico y de adicción a drogas y alcohol). Los resultados no confirman la validez divergente de la narrativa prototípica anoréxica. Los participantes tendieron a identificarse principalmente con la narrativa de tipo depresiva. No se hallaron diferencias significativas entre los niveles de identificación del prototipo anoréxico y depresivo, ni entre el prototipo agorafóbico y alcohólico. La única diferencia significativa se encontró entre la narrativa de tipo anoréxica y la drogodependiente. Sin embargo, se encontró asociación entre la severidad y duración de las conductas clínicas con el grado de identificación a la narrativa prototípica. los resultados se discuten en términos de un transdiagnóstico versus un enfoque de los prototipos de la psicopatología de los desórdenes alimentarios.

Palabras clave: Narrativas, psicopatología, prototipos de narrativa, anorexia, validez divergente

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Introduction

Several authors have been claiming that psychological disorders are characterized by specific meaning systems and that this systems can be best captured in narrative prototypes (e.g, Gonçalves et al., 2001; Herrmans & Hermans-Jansen, 1995; Leahy, 1991).

According to Gonçalves et al. (2001), prototype narratives refer to the communality of themes in the individuals' core auto-biographical memories. These prototypes are hypothesized to differentiate meaning organization of different psychological disorders.

Following a ground analytic method Gonçalves and colleagues were able to construct narrative prototypes for different psychological disorders, namely: Anorexia Nervosa, Depression, Agoraphobia, Alcoholism and Drug addiction (c. f., Gonçalves & Machado, 1999). Several studies brought evidence for the convergent validity of these narrative prototypes. That is, patients with different psychological disorders were able to identify with their narrative prototype (c. f. Gonçalves et al., 2000). In spite of the promising nature on the convergent validity of the different prototype narratives, it remains to be understood if individuals with a specific psychological disorder are able to discriminate between different narrative prototypes (i. e., divergent validity).

The objective of this study was to test the extent to which individuals diagnosed with anorexia nervosa were able to identify differentially with the anorectic narrative prototypes (comparatively with the depression, agoraphobia, alcoholism, and drug addiction). Additionally, we explored different characteristics of the anorectic patients' sample that may contribute to differentiate the degree of identification with the prototype narratives.

Method

Participants

Seventy patients, diagnosed with anorexia nervosa (AN) according to DSM-IV participated in this study. Forty-eight (68.6%) with restricting sub-type, and 22 (31.4%) with binge-eating/purging sub-type. The majority of the participants were female (68; 91.7%), only two (2.9%) were male. Their age ranged between 12 to 37 years old (M = 20.29; SD = 5.93). Most were single (65; 92.9%); and student (51; 72.9%) with an educational level ranging from middle school to university degree (M = 10.73; SD = 1.48).

The inclusion criterion for this study was the existence of a current diagnosis of anorexia nervosa according to DSM-IV (APA; 1994). Any co-morbidity with other axis I or II disorders constituted exclusion criteria.

The study procedures were approved by the relevant Ethical Committees and all participants gave their written informed consent after the procedures were fully explained to them.

Measures

A Clinical Diagnose Questionnaire was designed to assess participants' symptoms. This questionnaire was filled in by the patient's therapist and also included questions about the presence of binge eating episodes and compensatory behaviors (i.e., self-induced vomit, laxatives, diet/low calorie food intake and excessive exercise) assessed in terms of frequency and severity (i.e., "not existing"; "up to once a week/mild"; "2 to 3 times a week/moderate"; "4 times a week up to daily/severe"; "more that once a week/extreme").

Participants were asked to fill a questionnaire with demographic and socio-economic information and questions regarding their eating disorder and treatment history (i.e., anorexia nervosa course and duration, therapy sessions and inpatient care).

For the assessment of psychopathology and psychological distress we used the Symptom Checklist 90-R (SCL 90-R; Derrogatis, 1977). It is a self-report measure with 90 items in a five point scale of distress: 9 primary symptom dimensions (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism) and 3 global indices of distress (Global Severity Index, Positive Symptom Distress Index and Positive Symptom Total).

Eating related attitudes and behaviours were assessed by the Eating Disorders Inventory (EDI; Garner, Olmsted & Polivy, 1983). The EDI is a self report measure with 64 items. Participants are asked to answer a six-point forced choice format. EDI has 8 sub-scales: 3 for attitudes and behaviours concerning eating, weight and shape (Drive for Thinness; Bulimia; Body Dissatisfaction) and 5 related to more general organizing constructs or clinically relevant psychological traits for eating disorders (Ineffectiveness; Perfectionism; Interpersonal Distrust; Interoceptive Awareness; Maturity Fears).

Finally, and to study the divergent validity in individuals with anorexia nervosa, the Prototype Narratives Hierarchy Questionnaire (Gonçalves & Henriques, 2000) was used. It was conceived to elicit a comparative evaluation of the participant's identification with each of the five prototype narratives. Participants' task was to create a hierarchy, organizing their identifications by assigning a ranking order for the degree of identification with each prototype narrative.

Procedure

All participants were recruited in clinical settings by their staff psychiatrist and referred to the research team along with the Clinical Diagnose Questionnaire. Then, an individual interview took place where the different psychological measures were taken (Demographic and Socio-Economic Questionnaire; Prototype Narratives Hierarchy Questionnaire; SCL 90-R; EDI).

Data Analysis

Nonparametric statistic analyses were used. Anorexia prototype narrative divergent validity was computed using Friedman test for the comparing order of identification for each narrative prototype. A Multiple Comparison Formula (MCF) was used to test the significance of differences between each prototype narrative. Finally, a multiple regression analysis was used to test the predictive power of different participants' demographic and clinical variables, assuming the mean order given to the anorectic prototype narrative as the dependent variable, and demographic, diagnose, and psychopathology and eating disorders symptoms as independent variables.

Results

According to the present symptomatology and clinical history, the results found show that the majority of the participants had restricting subtype diagnosis (48; 68.6%). All were on psychotherapeutic process and almost half of them had been in inpatient care, at least once (31; 44.3%). A third (34.3%) of the participants had had anorexia nervosa disorder for two years and a half or longer. The majority of the participants (65; 92.9%) lost weight and/or maintained it under normal range by dieting or fasting. Finally, most of the means and standard deviation of SCL 90-R and EDI subscales were (with the exception of EDI Bulimia subscale) above the cutoff's score.

Results on the divergent validity (see Table 1), show that participants identify in the following order with the different narrative prototypes: first, depression; then anorexia, agoraphobia, alcoholism, and drug addiction. Only the comparison between the identification with the anorexia prototype narrative and the drug addiction prototype narrative (see Table 2) was found to be statistically significant (χ^2 =50>40.6; p<.05). There were no significant differences between the identification with the anorexia prototype narrative and the other three narratives (i.e., depression prototype narrative, agoraphobia prototype narrative and alcoholism prototype narrative).

Table 1. Mean order of identification with the prototype narratives (PN) and Friedman's χ^2 for the ordination results.

Prototype Narratives	Mean Order of Identifications
Depression PN	3.31
Anorexia PN	3.12
Agoraphobia PN	3.10
Alcoholism PN	3.06
Drug addiction PN	2.40
	χ^2 (4 g.I) = 13.66, p<.01

Note: The highest mean order value is in bold.

Table 2. Prototype narratives pair's comparison and statistic significance of their differences using the Multiple Comparison Formula (MCF) which were obtained, for the order results, the value of 40.6.

Prototype Narratives Pairs (order values sum)		Differences in the order values sum	Statistical significance
Ano PN (219)	Dep PN (233)	-14	-14<40.6; N.S.
Ano PN (219)	Ago PN (218)	1	1<40.6; N.S.
Ano PN (219)	Alc PN (215)	4	4<40.6; N.S.
Ano PN (219)	DrAd PN (169)	50	50>40.6; p<.05
Dep PN (233)	Ago PN (218)	15	15<40.6; N.S.
Dep PN (233)	Alc PN (215)	18	18<40.6; N.S.
Dep PN (233)	DrAd PN (169)	64	64>40.6; p<.05
Ago PN (218)	Alc PN (215)	3	3<40.6; N.S.
Ago PN (218)	DrAd PN (169)	49	49>40.6; p<.05
Alc PN (215)	DrAd PN (169)	46	46>40.6; p<.05

In addition we conducted exploratory analysis to explore how different variables might impact the degree of identification with the anorectic prototype narrative. Several interesting patterns arose. There was a tendency for highest identification with the anorexia prototype narrative, compared with the identification with the drug addiction prototype narrative, when participants had a highest socio-economic status (χ^2 = 31>20.4; p<.01), when they binged and/or purged most severely (χ^2 = 19>15.22; p<.05); and, when they had clinically significant scores on SCL 90 paranoid ideation subscale (χ^2 = 42>32.88; p<.05) or EDI (χ^2 = 40>34.3; p<.05). Subjects that had the clinical condition for at least two and a half years and a score above the cutoff point on the Bulimia EDI subscale had a higher identification with the anorexia prototype narrative compared not only with the drug addiction prototype narrative (χ^2 = 40>24.2; p<.01; X2 = 33>24.3; p<.01) but also with the agoraphobia prototype narrative (χ^2 = 27>24.2; p<.01; X2 = 28>24.3; p<.01) (see Tables 3 and 4).

Table 3. Divergent validity results in socio-economic status (SES), binge-eating/purge (BE/P) and anorexia nervosa duration (AND).

Superior SES n = 18	BE/P ≥ 2 times a day n = 9	AND ≥ 2,5 years n = 24
Ano PN (66)	Ano PN (35)	Ano PN (91)
Dep PN (61 / 5)	Dep PN (32 / 3)	Alc PN (80 / 11)
Alc PN (60 / 6)	Alc PN (30 / 5)	Dep PN (74 / 17)
Ago PN (52 / 14)	Ago PN (22 / 13)	Ago PN (64 / 27)
DrAd PN (35 / 31)	DrAd PN (16 / 19)	DrAd PN (51 / 40)
χ^2 (4 g.I) = 13.54, p <.01 MCF = 20.4	χ^2 (4 g.I) = 10.84, p <.05 MCF = 15.22	χ^2 (4 g.I) = 15.57, p <.01 MCF = 24.2

Table 4. Divergent validity results in Paranoid Ideation (PI) of SCL 90-R and Total (T) and Bulimia (B) subscales of EDI.

PI SCL 90-R above cut of point n = 45	T EDI above cut of point n = 49	B EDI above cut of point n = 24
Ano PN (150)	Ano PN (164)	Ano PN (88)
Dep PN (146 / 4)	Dep PN (164 / 0)	Dep PN (83 / 5)
Ago PN (138 / 12)	Alc PN (146 / 18)	Alc PN (74 / 14)
Alc PN (133 / 17)	Ago PN (137 / 27)	Ago PN (60 / 28)
DrAd PN (108 / 42)	DrAd PN (124 / 40)	DrAd PN (55 / 33)
χ^2 (4 g.I) = 9.67, p <.05 MCF = 32.88	χ^2 (4 g.I) = 9.86, p <.05 MCF = 34.3	χ^2 (4 g.I) = 13.57, p <.01 MCF = 24.3

An opposite pattern of results was found for other clinical measures. Participants that had therapy sessions for less than six months had significantly highest identification with the depression prototype narrative than with drug addiction prototype narrative (χ^2 = 45>23.59; p<.01) as well as anorexia prototype narrative (χ^2 = 25>23.59; p<.01) (see Table 5). Similarly, participants who scored bellow the cutoff value in SCL 90 Interpersonal Sensitivity and Anxiety subscales and EDI Total and Interoceptive Awareness subscales had a significantly highest identification with agoraphobia prototype narrative compared with the drug addiction (χ^2 = 28>19.95; p<.05; χ^2 = 41>19.95; p<.01; χ^2 = 36>19.95; p<.01; χ^2 = 43>19.95; p<.01) and anorexia prototype narratives (χ^2 = 20>19.95; p<.05; χ^2 = 31>19.95; p<.01; χ^2 = 26>19.95; p<.01; χ^2 = 24>19.95; p<.01) (see Table 6).

Finally, results of multiple regression analysis showed that the duration of the clinical condition (anorexia nervosa) was a significant predictor of the identification mean order given to the anorexia prototype narrative ($F(1,35) = 7.56$, $p<.01$). Post-hoc comparisons (Mann-Whitney) showed that participants with anorexia nervosa for at least two and a half years tended to identify most with the anorexia prototype narrative (44.13>31; $p<.01$) (see Table 7).

Table 5. Divergent validity results according to therapy sessions (TS)

TS < 6 months n = 24
Dep PN (96 / -25)
Alc PN (73 / -2)
Ago PN (73 / -2)
Ano PN (71)
DrAd PN (51 / 20)
χ^2 (4 g.I) = 16.96, p <.01 MCF = 23.59

Table 6. Divergent validity results in Interpersonal Sensitivity (IS) and Anxiety (A) of SCL 90-R subscales and Total (T) and Interoceptive Awareness (IA) of EDI subscales.

IS of SCL 90-R below cut of point n = 17	A of SCL 90-R below cut of point n = 25	T of EDI below cut of point n = 17	IA of EDI below cut of point n = 21
Ago PN (66 / -20)	Ago PN (101 / -31)	Ago PN (70 / -26)	Ago PN (83 / -24)
Alc PN (56 / -10)	Dep PN (75 / -5)	Dep PN (55 / -11)	Alc PN (68 / -9)
Dep PN (53 / -7)	Alc PN (73 / -3)	Alc PN (52 / -8)	Dep PN (65 / -6)
Ano PN (46)	Ano PN (70)	Ano PN (44)	Ano PN (59)
DrAd PN (38 / 8)	DrAd PN (60 / 10)	DrAd PN (34 / 10)	DrAd PN (40 / 19)
χ^2 (4 g.I) = 10.47, p <.05 MCF = 19.95	χ^2 (4 g.I) = 14.73, p <.01 MCF = 24.23	χ^2 (4 g.I) = 16.85, p <.01 MCF = 20.17	χ^2 (4 g.I) = 18.55, p <.01 MCF = 22.42

Table 7. Multiple Regression Analysis to predict the order of identification given to the anorexia prototype narrative.

Predictor	r2	b	t	Final Model
AN Duration	.11	.33	2.75	F(1,35) = 7.56*

*p < .01

Discussion

The pattern of results found in this study, revealed a tendency for individuals diagnosed with anorexia nervosa to identify themselves with the depression prototype narrative. Participants only discriminated the anorexia prototype narrative from the drug addiction prototype narrative. There was also a tendency for highest identification with the anorexia prototype narrative, compared with the drug addiction and, less often, with agoraphobia prototype narrative, in those from a highest socio-economic status, or with most severe indices of psychopathology. On the other hand, only the duration of illness had a predictive power on the degree of identification with the anorexic prototype narrative.

Altogether, the present study brings some evidence against the existence of a prototype narrative of anorexia nervosa. These data seems to be in accordance with the most recent transdiagnostic approaches claiming that multiple common processes are evident in different psychological disorders (c. f. Fairburn et al., 2003; Fairburn & Harrison, 2003; Russel, 2003) therefore invalidating the possibility of specific prototypes for different disorders.

However, the results also point out that duration and severity of the clinical condition increasead the possibility of significantly discriminating the anorexic prototype.

Chronic anorexia nervosa is, usually, considered a bad prognostic factor for the course and recovery of the disorder (c. f. Fairburn & Harrison, 2003; Steinhausen, 1995; Sullivan, 2002). This chronic condition may be associated with the development of a more rigid narrative prototype (Gonçalves et al., 2000).

If this is the case both, transdiagnostic and prototype approaches may co-exist, being the less morbid condition associated with transdiagnostic processes and more chronic situations associated with narrative prototypes.

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