



DESAFÍOS Y PERSPECTIVAS ACTUALES DE LA PSICOLOGÍA EN EL MUNDO ADULTO Y ENVEJECIMIENTO

**HEALTH, ENVIRONMENT AND RELATIONAL DYNAMICS.
QUANTITATIVE AND QUALITATIVE ANALYSIS**

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ABSTRACT

The present work aims to address the topic of eating disorders, from an innovative perspective. In fact, based on the case of the Centre "G. Gioia" Chiaromonte (PZ), (regional reference center of excellence), we investigate the influences that may have at the end of a long course of treatment, the external setting and internal setting. The methodological approach used is an integrated quality and quantity. In order not to lose any emotional nuance was chosen as a tool, open plan to the letter. The group of subjects consists of 90 girls aged between 13 and 50 years. On reports of the letters, was applied an analysis technique called multidimensional analysis of lexical correspondences (ACL) (Ercolani, Mannetti e Areni, 1990). Extracted factors were considered the first two, which together explain 77.30% of the total. The results show that the external setting, the setting and internal relations with the staff of the Centre, are considered by the patients themselves part of certain course of treatment.

Key words: Eating disorders, External setting, Internal Setting, Multidimensional Analysis, ACL

INTRODUCTION

Eating and Weight Disorders have been approached by different disciplines over time, i.e. Psychiatry, Clinical Psychology and Dynamic Psychology. Eating Disorders are usually addressed with the analysis of the various treatment and care approaches.



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The present work aims to tackle this complex matter from an innovative perspective. Moving from the case of G.Gioia Centre in Chiaromonte (Pz) - which has become a regional reference stand-point and in 2008 was included by the Ministry of Health amongst the five excellence institutions for multicentre research "*Best practices in Eating Disorders Treatment and Prevention*"- the study will address the influences that indoor and outdoor settings may have at the end of long-term treatment course, with theoretical reference to Environmental and Architectural Psychology.

Specifically, the study considers the influence of mountain and lake landscapes populated by animals (Pollino National Park) and cozy indoors designed in order for patients to perceive a friendly environment, where rooms are reminiscent of "home".

G. Gioia Centre is intended to revolve interventions and therapies around the individual, and to stick therapeutic actions and attitudes on a welcoming and warm core, in which daily successes or failures are shared as well.

Furthermore, this work addresses the influence due to the relationships between G.Gioia staff members and its patients. The Centre applies a multidisciplinary approach for the treatment of eating disorders in order to activate an existential process known as "emotional awakening" and to structure "nurturing bonds" which accomplish a sort of effective therapeutic initiation, enough to provide patients with skills to reasonably manage their future.

This for, the relationships developing between staff members and patients are particularly intense.

The hypothesis is that residents with eating and weight disorders benefit from a green environment during their care journey and course of treatment, that patients feel more comfortable, integrated and at ease into a domestic setting reminiscent of their real homes. Furthermore, another hypothesis stresses the idea that after a long-term eating disorder treatment at G.Gioia Centre subjects establish a relationship based on trust, friendship and gratitude with the staff members.

The methodological approach applied here is both qualitative and quantitative according to the integrated approach standard. In order not to lose any emotional nuance and to ensure there were no influences over patients, the open letter form was chosen as a survey tool.

METHOD

Participants

The group of patients consists of 90 women aged between 13 and 50. It is not possible to detect their origins since letters are signed only by a first name or nickname. The letters were collected between August 2006 and the III quarter of 2009. The subjects belong to different Italian regions, specifically: Campania (28%), Basilicata (23%), Calabria (19%), Puglia (14%), Sicily (7%), Piedmont (1%), Sardinia (2%), Molise (2%), Abruzzo (1%), Marche (1%), Lazio (1%), Friuli Venezia Giulia (1%). Interviewees were hospitalized for nervous anorexia (50%), nervous bulimia (29%), BED (18%) and NAS (6%).

Survey tools

The tool is a free scheme letter. At the end of their therapeutic course, exactly three days before leaving the Center, residents could write whatever they wanted (emotions, comments, songs, rhymes, perceptions, credits, etc...) in a journal called "*The caresses of the damsels*." This method was chosen in order to eliminate the "experimenter" variable and try not to miss any free expression of emotion acted by the subjects. At the end of a long-term treatment at G.Gioia Center residents could consult a diary kept in one of the head offices. In writing the letter, the subjects didn't have a track set, neither time or space restrictions.



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Procedure

Following a presentation of the in-depth quantitative analysis that was carried out with the support of a statistical software known as SPAD¹ (version 5.6). The software processed the words and lines that residents with eating disorders at Gioia Centre have used in their letters to talk about their experience, from the psychological, emotional, physical and relational point of view. The analysis identifies factors or scale factors capable to express, whether in summary, the different representation modalities residents adopted to describe care processes within the Centre.

The method presented here is a specific novelty in researches addressing the way patients perceive their eating disorders treatment.

Results dealt first with relational modalities between residents and operators, which can refer to a relationship that is: authentic, meaningful, relevant and focused on trust, thus on consolation and assistance. It also clarified the importance residents acknowledge to the indoor and outdoor setting and how these two elements contribute to the care process. The analysis of the collected data was carried through a qualitative and a quantitative approach, according to an integrated perspective. These two approaches are intimately given by different logical and thus epistemological views, respectively the neo-positivist and interpretive one, implying alternative ways to understand reality, the objectives of the research, the role of the researcher and the technological equipment. The development of social sciences, however, highlights the usefulness of adopting both perspectives as often as possible, thus not limiting the research to just one approach. The integration methodology is an enrichment of facts and therefore those who believe the contrast between the neo-positivist and interpretative approaches to be inconsistent, need to rather urge the promotion of an integrated approach ensuring greater effectiveness both to the survey and possible interventions (Losito, 1993, 1999, 2004).

RESULTS

Lexical correspondence analysis: main results

The multidimensional analysis² technique known as lexical correspondence analysis³ was applied to letter reports. This technique allows to synthesize the textual material in a small number of scale factors or factorial axes, which provide a geometric and structural representation (Ercolani, Mannetti and Arena, 1990). Each factorial axis consists of two semi-axes according with positive and a negative sides, which can be interpreted, each one on his behalf, as semantic dimensions. Each factorial axis and thus each semi-axis is given by different combination or combinations of words belonging to the analyzed textual material.

In statistical terms, words which concur to determine factors are called "active" text variables.

In the specific case of this research, lexical correspondence analysis was conducted on a total of 79 words and tables of words⁴ to be active text variables. Amongst the extracted factors, the first two were intended to explain the 77.30 % of total inertia, definable as the total variability in the textual material given by the presence of different words. Each factor will be described and interpreted on the basis of the positive and negative semi-axis composing it. It should also be stated that words and phrases listed in the table follow descending order with respect to a statistical factor called *absolute contribution*. This is a key factor since it allows to determine the relevance given to each word and each modality, in the case of extra-text variables, to determine a factor. It is therefore clear that words/variables with a higher absolute contribution are those to characterize and specify the factor dimension as a meaning dimension.



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Factor I: Relationship with the staff versus the perception of indoor setting

The first factor explaining 43.79% of total inertia is characterized by the “*Relationship with the staff versus the perception of indoor setting*” (Table 1). The positive semi-axis presents the category “*staff*” consisting of all the names of people that work at G.Gioia Centre linked to words such as “*sweet*”, “*figure reference*”, “*taught me to grow*”, “*dried my tears day and night*.”

This shows a very emotionally charged relationship between patients and operators.

Indeed, it is important to note that this category holds the highest number of frequencies of words (703). Another category of words in the positive semi-axis belonging to this factor is “*activities*”. The latter category encompasses all the various activities that residents at Gioia Centre are involved in during the course of treatment, i.e. “*hippotherapy*”, “*laboratories*”, “*music therapy*”.

Residents participate in those activities with the assistance of the operators.

The fact that the subjects have sought to emphasize the importance of activities in their letters, not from the therapeutic but from the relational, emotional and enrichment of relationships point of view, stresses the profound intensity of relationships between patients and the staff.

The words “*taught*” and “*return*” match the clear picture presented in this semi-axis.

Indeed, the relationships between residents and staff members, reflect the issue of teaching, as if patients at the end of their therapeutic course feel to have learned something so that the return to a normal life, whether still scary, assumes a positive value. The word “*world*” is often expressed as a feeling of discovering something that was lost due to the disease and is now able to be appreciated again thanks to the treatment and the relationship with the operators. The words “*emotion*” and “*reports*” express a strong link that binds patients to the staff members.

Moreover, the concept of emotion is always positive as something you do not want to forget.

The negative semi-axis focuses on the perception that the subject hold over the indoor setting at the Gioia Centre and the connotation they give to it. The category “*indoor*” includes all the words related to the domestic environment as “*bath*”, “*relax room*”, “*colored rooms*”. This category of words is often compared with family and home, transmitting a sense of peace and tranquility.

The category “*remember*”, expresses on the one hand the fact that patients do not want to be forgotten and on the other hand that they will always remember the place they lived in during the treatment. The word “*disease*” is often expressed as a an inner entity that can be defeated by looking inside oneself, as long as by “*the warmth of this place*.” The subjects connect their experience at the Gioia Centre with “*hugs, cuddling, caresses and smiles related to the place and people who live there*.” It is interesting to note that the word “*heart*” is adopted to mean that the Centre will remain in their hearts and that it has taught them to “*feed their hearts*” .

The subjects can always “*trust*” this “*amazing structure*”, “*this place of love and warmth*.”



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Table 1: Relationship with the staff versus the perception of indoor setting

Positive Semiaxis			Negative Semiaxis		
Active text variables	c.a.	c.q.	Active text variables	c.a.	c.q.
Staff	14.8	0.72	Indoors	9.2	0.93
Activities	6.4	0.61	Warmth	7.1	0.97
Sharing	2.2	0.80	Memory	3.3	0.88
Thought	1.9	0.50	Disease	2.7	0.77
Return	1.9	0.44	Affection	2.4	0.82
World	1.7	0.25	Place	2.6	0.55
Emotions	1.6	0.55	Hugs	2.0	0.91
Relationships	1.4	0.30	Me	2.0	0.45
			Heart	1.9	0.81
			Brighthness	1.3	0.84
			Trust	1.3	0.50
Active extra-text variables	c.a.	c.q.	Active extra-text variables	c.a.	c.q.
Year 2009	30.0	0.51	Year 2007	63.0	0.95

Factor II: Richness of treatment versus relational schemes

The factor explaining the 33.51% of total inertia is characterized by “Richness of treatment versus relational schemes” (Table 2). The positive semi-axis highlights the perception that patients hold regards their treatment at the G. Gioia Centre at the end of their therapy. It is important to note that one of the most prominent issues here is the outdoor setting. Indeed, in the “*off-site location*” words such as “*mountains*”, “*plains*”, “*panorama*” are included. The concept of off-site location is often linked to the words “*wonderful*”, “*wonder*”, something extraordinary that has eased patients’ recov-



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ery. The natural landscape of Chiaromonte (PZ) is defined more than once as “*landscape that has calmed me*”. In several cases, respondents talk directly to Chiaromonte or to its landscape, as if they were real people, and openly thank them for the valuable help they gave.

The semi-axis includes a constellation of words which easily reflects the great emotional burden these patients are invested with at the end of the days spent at the Centre. The word “*angel*”, almost always referred to the operators, shows that patients have been able both to rely and trust the staff members, considering them as veritable lifelines from a no escape disease. The subjects often use the term “*guardian angel*”, where the help of the operators is perceived almost spiritually, to emphasize the idea of their guidance and protection. The analysis of the letters written by the subjects often reflected a desire to emphasize change, the clear dividing line between past, present and future. Thanks to activities in the Centre residents have enriched their knowledge of metaphors to express such distinction. The word “*mask*” is often used with reference to theater therapy activities but also to express the false identity that patients held in the past and has been momentarily left aside during the treatment, when they could get the “*mask*” they had worn to hide the disease off. This also links to the word “*world*”, since the subjects finally manage to perceive a world where to live peacefully, albeit with sacrifices and efforts, thanks to the real “*lessons*” received during the residency at the Centre. In many letters, residents write about their journey by referring to specific “*moments*” ranging from “*very difficult*” at the beginning to “*beautiful*” at the end, as if to draw a line. The category “*to love*” incorporating the words “*love*”, “*I love*”, “*love me*” expresses patients’ new consciousness, that is being in love and to love life as a wonderful thing. Sometimes patients admit they have discovered “*love*”. While at the beginning of the cure, “*nobody could understand me*” at the end “*nothing and nobody can stop me*”.

Once again, the letters emphasizes the difference between past and present and hint at the hopes for the future.

The negative semi-axis, is characterized by words and categories referring to the “*relational mode*” between patients and the G.Gioia Centre which implies not only talking people, but the Centre itself, as if it was an entity: residents write and address it directly even describing its individual parts. In “*The caresses of damsels*” what emerges in a really strong way is the size of “*longing*”, explicitly “*I am going to miss it*”, “*I will miss you*”. It should be noted that the staff members are the primary recipients of these strong expressions of gratitude and true love on the patients’ side.

Thus, the word “*thank you*” has a very high frequency (386) and can be traced in all the letters. Upon leaving the hotel, the subjects are aware of the difficulties they are going to face ahead and manifest fear to “*leave the Centre*” but they also express the hope and purpose to be able to definitely emerge from eating disorders as well. The category “*to trust*” containing the lines “*I trust*”, “*I rely on*” refers in particular to staff members. The letters reveal a feeling of total openness and respect towards the operators and the Centre. The “*relationships*” between people involved in the care process are fundamental in order to stay in residence and succeed in therapy.



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Table 2: Richness of treatment versus relational schemes

Positive semiaxis				Negative semiaxis		
Active text variables	c.a.	c.q.		Active text variables	c.a.	c.q.
Outdoor	8.0	0.95		Will miss	6.6	0.88
Mine	7.5	0.89		Team	6.5	0.24
World	5.7	0.63		Thanks	5.9	0.77
Wonder	2.0	0.59		To leave	4.9	0.97
Thought	1.9	0.38		Relationships	3.6	0.59
Path	1.9	0.78		To trust	1.6	0.47
Mask	1.7	0.68				
Angels	1.7	0.76				
Moments	1.6	0.62				
No one	1.5	0.67				
To love	1.5	0.96				
Active extra-text variables	c.a.	c.q.		Active extra-text variables	c.a.	c.q.
Year 2009	36.8	0.48		Year 2008	58.7	0.87

DISCUSSION AND CONCLUSIONS

The topic of eating and weight disorders is comprehensively treated in Psychology.

The contribution this work provides existing literature with is a qualitative and quantitative integrated approach to analyze the data collected in one of the two Italian public centers for eating disorder treatment, G.Gioia Centre in Chiaromonte (Pz).



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Albeit the results are not extendable to the entire population, moving from our assumptions over the subjects we can assert that: the first hypothesis, patients with eating and weight disorders during their course of treatment benefit from a green environment with animals, lakes and fresh air, is confirmed. Indeed, both the analysis of data and previous literature contain results validating our thesis. According to the principles of environmental/eco-psychology, immersion in nature grants tighter contacts with the environment, as the encounter with nature is an opportunity to rediscover our bonds with life and to access a deep sense of connection where every human being is perceived to be part of the same design. The connection with nature is sought through the recovery of perceptual and emotional dimensions of experience in order to turn on “that knowledge coming from the heart and the body.” The experience of nature is thus proposed to restore sensory and emotional relationships with the natural world comprehensive of the subject in its body and mind unity, where rationality and emotions are equal, as to develop a learning shaped by first-person experience rather than exclusively intellectual knowledge (Macy and Brown, 1998).

Our data confirm that residents give great importance to the outdoors with particular reference to natural elements. Specifically, outdoor elements carry “peace and tranquility” and have regenerating effects. As for the second hypothesis, patients with eating and weight disorders feel more comfortable, integrated and at ease into a colorful, cozy and domestic setting reminiscent of home during their course of treatment, literature and collected data stress the same results once more.

According to the foundations of Architectural Psychology, indoor settings of psychiatric hospitals influence relationship dynamics and therefore promote healing (Baker, Davis, Silvadon, 1960).

Slighting a little from Architectural Psychology pioneers, it is interesting to note that in the negative semi-axis related to the first factor, *relationship with the staff members versus the perception of indoor setting*, the category “indoor” is combined with the concepts of ‘trust’ and ‘affection’.

It should be stressed that seemingly independent factors are strictly connected here and confirm our thesis. The attention over indoor setting is the first great “care factor” according to the Centre’s policy as to suddenly stimulate an emotional response of the vegetative and unconscious mind, to lower patients’ anxiety to receive treatment and eradicate their violent fantasies over mental treatment which usually afflict subjects with eating disorders.

One of the Centre main objectives is to practice a sort of welcoming therapy to the “environment” from the start, making sure to shift the attention towards the inner and outer environment rather than to focus on the commonly “sanitization” issues that trigger resistance holding back the need and desire to “be cured.” Moreover, to build a warm and welcoming indoor setting, which recalls “home” and real “home environments” has certainly helped to make patients feel more comfortable at the reception center and to socialize with other residents and with the staff during the length of their stay. In this regard, assumptions 2, *after a long-term residency at G.Gioia Centre to treat eating and weight disorders, residents establish a relationship of trust, friendship and gratitude with the staff members*. When the treatment procedure ends, patients are usually afraid to detach from the operators and the Centre and their positive feelings towards the staff members are confirmed. Indeed, both the positive semi-axis according to the first factor, *the relationship with the staff versus the perception of indoor setting*, as well as the negative semi-axis of the second factor, *richness of treatment versus relational schemes*, express respectively a sense of great emotional sharing with the operators and fear of leaving the Centre, albeit knowing they can call any time.

In addition, according to the negative semi-axis of the second factor, one sees how patients have become close to the staff members and how their work is a source of credits.



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¹ Système Portable pour l'Analyse des données: Created in France in 1985, it still is a reference software for the exploratory analysis of large amounts of data, including text data.

² This technique is applied in the case of other textual data such as answers to open questions and in depth interviews transcripts

³ Further details in Ercolani, Mannetti and Areni, 1999; Losito, 2002b.

⁴ The words were originally 5.139. Reduction was due to the elimination of empty words which “do not express any content of interest” (Bolasco, 1999, p. 192), and standardization of semantic categories including equally significant words.