Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity
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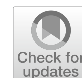
ORIGINAL ARTICLE



Personal recovery of young adults with severe anorexia nervosa during adolescence: a case series

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Abstract

Purpose Despite the emergence of a growing qualitative literature about the personal recovery process in mental disorders, this topic remains little understood in anorexia nervosa (AN), especially severe AN during adolescence. This cases series is a first step that aims to understand recovery after severe AN among adolescents in France, from a first-person perspective.
Methods This cases series applied the interpretative phenomenological analysis (IPA) method to data collected in semi-structured face-to-face interviews about the recovery process of five young women who had been hospitalized with severe AN 10 years earlier during adolescence.
Results A model of recovery in four stages (corseted, vulnerable, plastic, and playful) crossing seven dimensions (struggle and path of initiation; work on oneself; self-determination and help; body; family; connectedness; and timeline) emerged from the analysis. New features of the AN personal recovery process were characterized: bodily well-being and pleasure of body; stigmatization; the role of the group; relation to time; and importance of narratives. We suggest a new shape to model the AN recovery process, one that suggests several tipping points. Recruitment must now be widened to different AN contexts.
Conclusions The personal recovery paradigm may provide a new approach to care, complementary to medical paradigm.
Registration of clinical trial No. NCT03712384. Our study was purely observational, without assignment of medical intervention. As a consequence, this clinical trial was registered retrospectively.
Level of evidence Level V, descriptive study.

Keywords Anorexia nervosa · Eating disorders · Recovery · Qualitative research · Personal narratives

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Introduction

Anorexia nervosa (AN) is one of the most severe mental disorders known [1, 2], with a high mortality rate as well as a high risk of becoming chronic [3]. Lifetime prevalence among women is evaluated at between 1.2 and 2.2%, with incidence highest during adolescence [1]. The recovery process remains poorly understood [4] with non-consensual definitions [5].

The scientific literature describes the process of recovery from mental disorders from two different perspectives: medical recovery and personal recovery. Medical recovery is based on more objective criteria, including cure (symptom disappearance), remission (symptom suspension) or therapeutic response (change of values after treatment) [6]; it is generally studied by examining quantitative outcomes. Experiential or personal recovery (PR) is studied through qualitative research of first-person accounts or by consensus

methods, starting with the patients' struggle to obtain a place in their own recovery [7]. A recovery orientation has become the basis of mental health policy in English-speaking countries [8].

A recent systematic review [1] summarized the criteria for relapse, remission, and recovery used in AN outcome studies as: weight only, reported symptoms only, or both. Criteria besides weight often considered are menstruation and psychological and behavioral features. Moreover, there are notable disparities in the times distinguishing remission from recovery [1].

Despite numerous quantitative studies, however, the reasons for recovery, relapse, or continued struggle are still unclear [9]. Some consider the medical framework reductive [4]. Moreover, this research usually focuses on risk factors, ignoring the protective factors essential for supporting recovery [7]. Some authors consider that this field is suffering from "broken record syndrome" [5]. It suggests that the same paradigm is always offered to understand recovery process, preventing from opening on new approach. Furthermore, symptom improvement is not always the patient's first priority [10], and improvement can happen despite persistent symptoms [8]. Patients and clinicians differ in how they define both disease and recovery; patients might expect a more individualized, subjective approach, whereas clinicians may be more invested in objective and rigorous criteria [11, 12].

A recent systematic review offered a theoretical framework for studying PR in mental disorders [8], defining it as an active, individual, unique, nonlinear, multidimensional, and gradual process. It can be described as a phase or a stage, as a struggle, a life-changing experience, or even a trial-and-error process. It may be structured by a turning point, after which there is no turning back. This "tipping point of change" in AN recovery has been recently reported by a qualitative study on people with AN view, as a balance between "realizing the loss of something valuable", "the risk of loosing something valuable" and "something to live for/stay well for" [13].

It is aided by a supportive, healing environment and might occur without cure. Their research based on studies of first-person narratives of recovery from mental disorders identified five factors that support recovery: connectedness, hope and optimism about the future, identity, meaning in life, and empowerment. A meta-ethnographic review of 8 qualitative researches about PR in AN [4] examined eight studies, extracting themes related to the process of change, factors supporting PR, and the concepts of empowerment and self-reconciliation. A recent systematic review and meta-synthesis [14] of 14 qualitative research about women's recovery from AN described its challenges for a fragmented sense of self: "a reclamation of self through meaningful relationships, rebuilding identity and self-acceptance." More generally in Eating Disorders field, studies of first-person narratives of recovery are increasing [15], highlighting the importance of more holistic and individualized care approach [4, 14, 16]. Focus is widening to peers and parents view, allowing highlighting the importance of enhancing family and peers [16].

Finally, most PR studies come from the USA, the UK, Australia, and Canada [8]. Further research is needed to ground an understanding of PR that includes its cultural context [8]. In France, PR from AN has barely been explored [17]. Our pilot study seeks to enhance understanding of recovery from AN in France and support the dissemination of the PR paradigm among the French mental health community working with AN, as a complement to the medical approach.

This study thus considers the question: how do people who were hospitalized during their adolescence for severe AN experience and make sense of their recovery?

Methods

This qualitative interview-based study is reported according to the COREQ 32 guidelines [18]. It applies interpretative phenomenological analysis (IPA) [21], supplemented by the ICD 10 criteria [19].

Setting and participants

IPA recommends homogeneous and sparse sampling to enable appreciation of the convergences and divergences of rich phenomena. To maximize homogeneity, we first chose very precise criteria (presented in Box 1) to allow an in-depth focus, before expanding our view to a wider study of AN recovery. Recruitment was limited to patients who had been admitted to the same hospital (IMM) during the same year, for a homogeneous experience of care. A 10-year period was chosen as substantially exceeding 7 years, the longest mean duration considered to define medical recovery [3], to ensure perspective on the recovery process. Hospitalization for AN is considered as criteria for severity in France [20].

BOX 1: Eligibility criteria for study participation

Inclusion criteria

- woman
- adult between 20 and 30 years old
- with history of restrictive AN (ICD-10: F50)
- with no other comorbidity
- hospitalized for AN during adolescence (10-19 years old), 10 years ago, in adolescent psychiatry at Institute Mutualiste Montsouris (France)
- native French speaker

- considers herself recovered
- agreement

Exclusion criteria

- presence of AN criteria (ICD-10: F50) during research interview,
- absence of all recovery qualitative criteria after qualitative analysis.

Purposive sampling was used to pursue homogeneity. Clinical files, including ICD-10 diagnoses, were used to select the patients. Only the last author (NG) had ever had a relationship with any of the patients selected and she did not participate in the interview or see subjects during the study period. Among the 102 girls hospitalized (in 122 separate admissions) 10 years before these interviews, 15 adolescents had been diagnosed with restrictive AN (ICD 10: F50) without comorbidities (such as obsessive–compulsive disorder or depression). We attempted to contact all 15, via email and telephone and to explain the research aims and the first author's (MAP) personal goals. The contact results are presented in Fig. 1. We successfully contacted seven of them and five agreed to participate. One refused because she felt that she had not recovered, and another because she was not interested. Eight women could not be reached, because they had moved. Five women (33%) thus provided written informed consent and were included in the study. However, two of the five women did not meet ICD-10 AN recovery inclusion criteria. They were not included too. Table 1 describes the participants' characteristic with some basic socio-demographic and medical data.

Data collection

Data were collected in 2014 during a face-to-face semi-structured interview of each woman conducted in the hospital where she had been hospitalized in 2004 (Institut Mutualiste Montsouris) a decade earlier, in a quiet, insulated office. The topic guide (Box 2) was constructed based on a literature review and was not changed after pilot testing. Interviews were audio-recorded and transcribed. Table 2 reports the duration of each interview.

BOX 2: Initial interview topic guide domain

(1) Could you tell me about how your life has gone since your first hospitalization here for AN?
(2) Can you tell me what factors helped you to move forward and what factors blocked this forward progress?
(3) All during this time, how have you felt about talking about yourself?
(4) How have your relationships with others developed and changed?
(5) Could you talk to me a little about your relationship with your body over this whole period?
(6) How would you define recovery after AN during adolescence?
(7) How would you define yourself as a person?
(8) Do you think or dream about it today? Do you tell yourself stories of what happened to you?
(9) If you were talking to someone with AN today, what would you like to tell him/her?

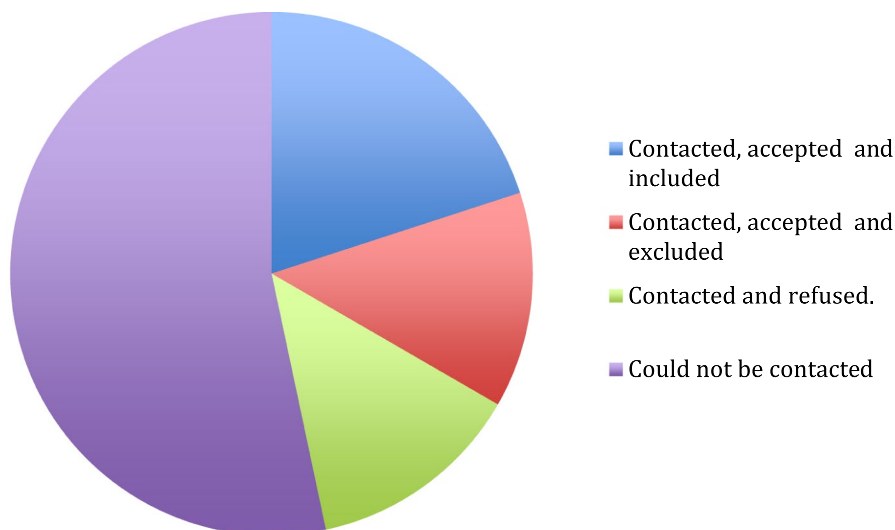


Fig. 1 Participants recruited

Table 1 Participants characteristics

Patients	Age (years) during hospitalization* during interview*	BMI (kg/m^2) at admission	Patients' symptoms (other than ICD-10 F50)	Medical complication	Number and length of hospitalization; nature of treatments	BMI (kg/m^2) at the end of each hospitalization	Follow-up (nature and length)	BMI (kg/m^2) during interview	Regular periods (without contraception) during interview	Meets AN ICD-10 criteria during interview	Profession during interview	Familial status during interview
A	*1st *hospitalization: 15 *2nd **hospitalization: 16 then 17 *Interview: 25	1st: 14.8 2nd: 15.4	1st: amenorrhea, withdrawal 2nd: amenorrhea, school drop out	1st: heart failure (5 days in intensive care unit) 2nd: heart failure (6 days in intensive care unit)	1st: 5 months an half: contract for weight gain, individual and familial psychiatric interview, nursing care, art therapy and psychotherapy for parents 2nd: 6 months and 3 weeks: naso-gastric tube, contract for weight gain, individual and familial psychiatric interview, nursing care and art therapy	1st: 19.6 2nd:20.0	1st: 4 months an half (*until relapse*): nutritionist, psychiatrist, psychotherapist, familial therapy, back-to-school 2nd: 2 years an half (considered as "recovered"): nutritionist, psychiatrist, psychotherapist, familial therapy, boarding school	24.4	Yes	No	Environmental engineer	Married One child

Table 1 (continued)

Patients	Age (years) during hospitalization* during interview*	BMI (kg/m^2) at admission	Patients' symptoms (other than ICD-10 F50)	Medical complication	Number and length of hospitalization; nature of treatments	BMI (kg/m^2) at the end of each hospitalization	Follow-up (nature and length)	BMI (kg/m^2) during interview	Regular periods (without contraception) during interview	Meets AN ICD-10 criteria during interview	Profession during interview	Familial status during interview
B	*1st hospitalization: 17 *2nd hospitalization: 18 then 19 *Interview: 27	1st: 13.2 2nd: 15.4	1st: amenorrhea, withdrawal, low self-esteem 2nd: amenorrhea, withdrawal, school drop out	1st: heart failure (6 days in intensive care unit) 2nd: No medical complication reported	1st: 5 months an half: naso-gastric tube, contract for weight gain, individual and familial psychiatric interview, nursing care and art therapy 2nd: 4 months and 3 weeks: contract for weight gain, individual and familial psychiatric interview, individual psychotherapy, nursing care and occupational therapy	1st: 18.7 2nd: 18.7	1st: 2 months an half (*until relapse*): general practitioner, psychiatrist, psychotherapist, boarding school 2nd: 1 year an half (considered as "recovered"): general practitioner, psychiatrist, psychotherapist, outpatient clinic then specialized boarding school (including care)	18.7	Yes	No	Waitress	Married 2 children

Table 1 (continued)

Patients	Age (years) during hospitalization* during interview*	BMI (kg/m^2) at admission	Patients' symptoms (other than ICD-10 F50)	Medical complication	Number and length of hospitalization; nature of treatments	BMI (kg/m^2) at the end of each hospitalization	Follow-up (nature and length)	BMI (kg/m^2) during interview	Regular periods (without contraception) during interview	Meets AN ICD-10 criteria during interview	Profession during interview	Familial status during interview
C	*Hospitalization: 14 *Interview: 24	14.4	Amenorrhea, withdrawal, hyperactivity	No medical complication reported	1 hospitalization of 2 months an half: contract for weight gain, individual and familial psychiatric interview, nursing care and occupational therapy	17.3	1 year an half (considered as "recovered"): general practitioner, psychiatrist, familial therapy, back-to-school 2 years for psychotherapy	18.8	Yes	No	Social worker educator	Lives with partner

*1st: for "First hospitalization";

**2nd: For "second hospitalization"

Table 2 Duration of interview

Patient	A	B	C
Time (min)	55 min	59 min	52 min

Data analysis

Three epistemological topics underpin IPA [21]: phenomenology, hermeneutics, and idiography. Phenomenology seeks to explore the informants' views of the world, to understand how a phenomenon appears in their conscious experience. Hermeneutic refers to the researcher's interpretative activity, and idiography emphasizes a detailed, deep understanding of the individual cases.

The analytic process proceeded through several stages, without software support. First, after reading and rereading the entirety of each interview, MAP and JG took descriptive notes, paying particular attention to linguistic details, including expressions and metaphors. Next, they drafted conceptual and psychological notes, by condensing, comparing, and abstracting the initial notes. Connections with and between notes were mapped and synthesized, and emergent themes developed. Each interview was individually analyzed in-depth; they were then compared to enable us to cluster themes into superordinate categories. Through this inductive process, the analysis moved through different interpretative levels, from more descriptive to more interpretative. Every concept not supported by data was eliminated. NG and MC supervised the analysis by taking part in several discussions. The results of the qualitative analyses were compared with the medical records and the ICD-10 criteria to triangulate the analysis. They were not returned to participants for comment or corrections (because we believed that discovering these data may be too abrupt for some of them).

We do not consider that data saturation was achieved, mainly because there are, we would argue, as many experiences as there are individuals. IPA has no formal recommendations (sample sizes usually vary between studies from 3 to 15 or more interviews) [22].

Results

The analysis defined seven themes.

- *Struggle and path of initiation* describes both difficulties and learning that women experience throughout their recovery as they face challenges and trials that will transform them.
- *Work on oneself* concerns the progressive advances that come with discovering the ability to transform oneself. It allows women to replace control with flexibility.
- *Self-determination and help* covers the tension between choosing entirely oneself and accepting help from others to gain more autonomy.
- *Body* concerns the metamorphoses of the body, from straitjacket to pleasure.
- *Family* portrays the transition between adolescence, when young girls need to ensure their parents love them, and adulthood, when they can safely build their own love stories and families.
- *Connectedness* depicts the trajectory from stigmatization, shame, and asking for help, to autonomy and reciprocity in a relationship with another—from stigma to desire.
- *Timeline* describes the recovery trajectory as a work of appropriation of one's own story to be able to project into and build a future.

Each of these themes appeared as a different dimension across the four steps of recovery.

- In the first step, they were *corseted,* that is, highly rigid: tightly encased in a therapeutic external shell to support internal fragility, but also a mode expressing femininity, depending on the period.
- In the second step, they were v*ulnerable:* exposed, with neither the previous defenses that AN provided nor any new protection as yet.
- In the third step, they were *plastic,* in an active but laborious process of change, aiming toward more flexibility.
- In the final step, they were able to be *playful,* finally achieving fruitful resilience.

These results are summarized in Table 3: with one line for each of the seven dimensions, and one column for each of the four stages. At the intersection between each dimension and each stage are specific variations of these experiences, described and illustrated with each participant's experience. AN ICD-10 criteria, perception of being recovered and AN recovery qualitative results were faced and congruent (Table 4).

The women are described as A, B, C, D, and E.

1st stage: CORSETED

- *Struggle and path of initiation* is *control*, understood in the semantic field of defensive warfare.

> "I had a sort of a wall around me" (A).

> "This armor that we are used to wearing, that gives the impression of numbness" (B).

- *Work on oneself* is *self-restriction*, emphasizing self-control.

Table 3 Path of recovery of serious adolescent AN

	Corseted	Vulnerability	Plastic	Playful
Struggle and path of initiation	Control	Collapse	Struggle	Life lessons
Work on oneself	Self-restriction	Loss of control	Empowerment	Resilience
Self-determination and help	Self-sufficiency	Subordination	Choice	Trust
Body	Shell	Deformation	Stretching up	Well-being
Family	Child's place	Support	Change	Flexible distance
Connectedness	Stigmatization	Group	Becoming autonomous	Reciprocity
Timeline	Suspension	Distortion	Regulation	Narrative

Table 4 Comparison between qualitative and quantitative data

	AN ICD-10 criteria	Perception of being recovery	AN recovery qualitative results
A	Yes	Yes	Yes
B	Yes	Yes	Yes
C	Yes	Yes	Yes

"The more I lost weight, the more it showed me I could keeping control; didn't want to be heavy. Very light; besides, more controlled than light"(A).

– Self-determination and help is self-sufficiency, refusing help.

"I had to do all by myself. No one could enter my life" (C).

– *The body* is *a shell* that protects against painfull emotions.

"My body became a shell, a kind of catalyst of fears. Everything had to be impermeable, an obsession for control as for life." (A).

"I made my body suffer because we don't let ourselves say things, to fit into boxes we've put ourselves in" (B).

"I created a shell [that made me] feel invulnerable." (C).

– *Family* raises the question of the *place* of the girl with AN inside her family.

"I had the impression I was transparent at home. I totally forgot myself. I formatted myself into the boxes they put me in" (B).

"My only question was: do my parents love me?" (C).

– *Connectedness* is *stigmatization*, with an image that is a burden to assume, even though visible suffering includes a call for help.

"Others looking at me is onerous; even if I don't talk about it, others see it" (A).

"It disturbs people, because it raises questions about non-pleasure, about death, something deadly in fact" (C).

– *Timeline* is *suspended*, with no awareness that time is flying.

"Everything was narrow, I couldn't be aware of passing of time" (A).

2nd stage: VULNERABILITY

– *Struggle and path of initiation* is a *collapse*, a huge breakdown.

"Everything is falling apart around me" (A).

– *Work on oneself* is *loss of control*, where previous excessive control has not created any alternative way of holding on yet.

"I realized I had to accept that I had to let go of this control over myself" (A).

"It's the moment that I let go" (B).

– *Self-determination and help* is *subordination*, meaning total deprivation and urgent need for help from others.

"I was well only in the hospital. It is a real problem. Life is not the hospital, is it? But even if I knew that, outside wasn't for me" (B).

– *Body* is *deformation*, with no clear bodily limits to contain and protect.

> "I began to regain weight. I had the feeling it would never stop anymore." (C)

- *Family* is *support*, where family availability (especially parents) is essential.

> "The most important was to know that I could rely on them. They would never give up"(A).
>
> *"My mother, she never judged me. The fact that my parents allowed me to be myself, that was a real support*" (B).

- *Connectedness* is a *group,* sometimes others with AN, with feelings of belonging and normality.

> "In this group, I felt part of the mass, with a totally normal life. I wasn't different from the others." (A).
>
> "In this group I'd reached the category of ordinary person" (B).

- *Timeline* is *distortion*, with an imprecise perception of time.

> "I spent only a few months at hospital. But for me, it was an eternity. I was focused on my tiny world… and after, all happened very fast!" (C).

3rd stage: PLASTIC

- *Struggle and the path of initiation: struggle* to go on and move forward, step by step.

> "I know it's a battle; I fought every day" (B).
>
> "I finally succeeding in going shopping; it's wonderful because I found clothes I loved and that looked good on me" (C).

- *Work on oneself* is *empowerment* development, gaining power over life instead of weight and body, by thinking differently, including through artistic mediation.

> "I became able to work on concrete things in everyday life "(B).
>
> "Artistic mediation helped me to… open up, in sense of expressing myself in painting. It's a sort of… catharsis" (C).

- *Self-determination and help* both involve the importance of *choice* in the recovery process and the acceptance of help, including psychotherapy.

> "I needed to fall flat on my face and get back up all by myself" (B).
>
> "The people taking care of me, they didn't feel that I was completely recovered. In a sense, they were right, I wasn't entirely recovered. I still had eating issues. And I began to be dependent on cannabis. But for me, I needed that, to let go of all that, to make my own mistakes, without being protected at all. It allowed me to really live, with a need to stop all analysis. I needed to demolish myself and reconstruct myself alone. However, it was different from the dangerous stages, where I wasn't aware of the destructive aspects" (B).
>
> "The psychotherapist is the one who really helped me to get angry and to assert myself… to manage to say things" (C).

- *The body* is *stretching up*, progressively gaining more flexibility

> "I began to allow myself to listen to what my body said, what it warned, to refuse to forget myself under pressure, whereas before when I felt bad, I couldn't give that to myself" (B).

- *Family* is *change,* both in the family dynamics to support the process of recovery from AN, including reflection about family functioning and dysfunctions.

> "It opened up communication for us that didn't exist before at all" (B).

- *Connectedness* is a process of becoming *autonomous*, developing the ability to recognize real friends, through the mirrors they provide, and the courage to break old and limiting links.

> "There was a moment where I absolutely wanted to be forgotten. It is also why I can't have relationships with people who knew me before. The image that they had of me wasn't who I really was anymore. I didn't want to be… identified with that anymore. I began to meet people who were a little better, who helped me to commit to recovery, feel better about myself" (B).

- *The timeline* tends toward a process of *regularization*, reintegrating the rhythms of everyday life and society.

> "Recovery happened naturally and progressively. It was when I rediscovered the seasons" (B).
>
> "It happened little by little. I managed to reconnect with the rhythm of the others" (C).

4th stage: PLAYFUL

- *Struggle and path of initiation* concern *life lessons*, where characters take ownership of their own story, acquiring the capacity to learn from life.

> "I'm proud of that. It's precisely this fragility that is my strength today.(…) It makes me feel really better, that I'm able to accept it" (B).

> "Recovery, it's learning to live one's own story" (C).

- *Work on oneself* is *resilience*, transforming an experience of suffering into the flexibility to adapt to events.

> "It is the moment where we manage to do something positive with a period that's not necessarily obvious. But that we succeed in accepting, transforming, and using. I think I really felt better when… when I accepted that it was a part of me, and above all, that it has been very very useful for making life choices really in line with what I really am" (B).

> "It is this ability, when I feel bad, to take a pause and think. I'm happy to have gone through that" (C).

- *Self-determination and help* is *trust*, both in other when in need of help, and in oneself to recognize when help is needed.

> "I realized that talking about me made me feel good and let me get some perspective. It's possible to ask questions, to put into words and to make sense of what I lived, of the reasons I had anorexia. And after it let me not be afraid of what I felt" (C).

- *The body* is *well-being,* with embody into her own body, opening it to pleasure and sharing.

> "I am now careful to react in time and give myself a moment of pleasure" (B).

> "The fact of feeling better in my body, that I give him pleasure and am capable of accepting my sensuality. In flamenco for example, you have to entirely accept your own body, and before I couldn't ever have been able to" (C).

> "It deals with accepting one's sexuality and desire" (A).

- *Family* is *flexible distance*, appropriate distance, including openness to the possibility of transmission and/or building one's own family.

> "I think there is something that mattered a lot to my parents; it's when I had a boyfriend. They saw me happy, they had confidence in me" (C).

> "With other outlooks on life, with self-acceptance, I'm proud to be the mother I' [23] ve become" (A).

- *Connectedness* is *reciprocity,* with more equal relationships where people can help each other.

> "Above all, it was me who wasn't well in fact. It was more the others who carried me, than the contrary. Whereas today, others can really count on me as much as I can count on them" (C).

> "The fact to get a distance away… also lets you get closer, to create links in all the cases" (B).

- *Timeline* is *narrative*, with continuity and fluidity between past, present, and future, where memories can be recounted without anxiety.

> "It's not really painful, it's, it's… it's a past, a past that brought me. It's what let me repair myself, take care of myself. It's what built me in fact" (B).

> "Telling this story, it's a little bit explaining the woman I became" (A)..

Position of participants in this model

This model might be depicted as a star with seven equal vertices (for dimensions) and four stages to climb vertices in each dimension (for the four recovery stages). Figure 2 presents the position in recovery of each participant with this model.

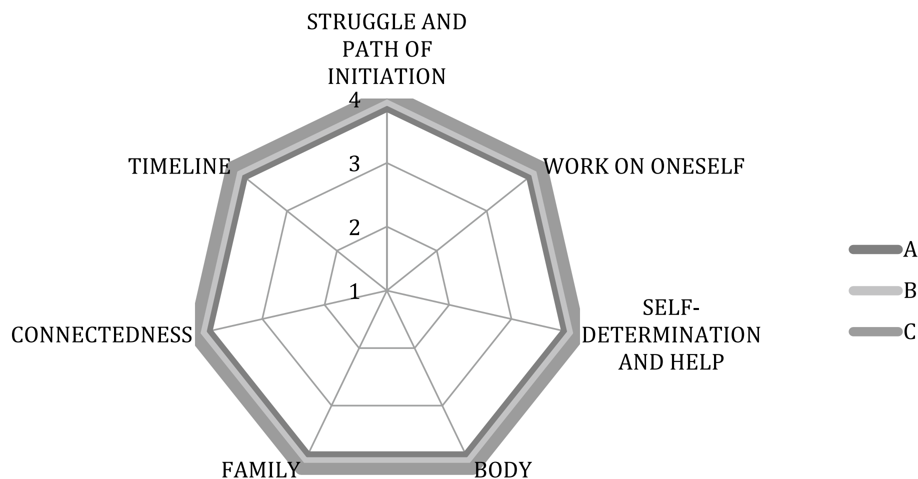
Discussion

These results suggest a representation of AN recovery as a journey [5, 8], and point out the importance of factors such as hope, self-acceptance, benefit from support form other [5, 8, 14]. The playful stage described in the results implies an ability to understand both his/her own mental state as well as the one of others. It may be linked with mentalization process, which has been recently highlighted as a potential factor that would improve recovery process [24].

These results enhance the framework of personal recovery as described by Leamy et al. [7] with some specific features.

- For the aspect of relationship within *connectedness*, our results suggest the value to be immersed in a "group", in

Fig. 2 Position of participants in the model



Numbers figure out the four stages of AN recovery: 1- Corseted; 2- Vulnerability; 3- Plastic; 4- Playful

which persons feel "normal", as a necessary protecting step, before individualization process.

- For *hope and optimism about the future*, we suggest that it has a "narrative" feature related to time for AN recovery. It implies both healing with the past, and projections to the future, embodied by recovery stories not overwhelmed by emotions.
- For *identity*, the stigmatization process has not previously been described in PR from AN. Our results show that recovery involves moving forward from shame and feelings of persecution in the first stages, to ending relationships with those who maintain active memories of AN at the last stages. A self-discovery process has been described, dealing with body image and challenging unhealthy thoughts about appearance and weight [4]. Our results suggest the importance of physical well-being, pleasure, and desire in this process, including a connection between mind and body.
- For *empowerment*, self-determination is central, but turns paradoxical in AN where excess of control is central. By accepting a painful journey that includes *vulnerability* and *subordination*, reconnection with emotions [4], and intense feelings of anxiety, depression, and loneliness [4, 17], patients can eventually reach a more flexible, effective control of life.

Furthermore, we present a new shape to model the AN recovery process, one suggesting several tipping points instead of just a single one [13]. It might encourage patients and healers to recognize and rely on each small step forward in AN recovery, instead of focusing only on medical remission criteria.

Limitations and directions for future research

Organization issues, pilot study and methodological demands (sample homogenization) limited both our sample size (no data saturation) and the diversity of our sample (geographic, age), thus limiting the scope of these results. Moreover, motivation to take part in the study has not been explored. The analysis appeared too interpretative to include participants' view of it in the triangulation process. Further research should diversify recruitment.

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Authors' contribution Map is the guarantor of this study. MAP, JG, MO, MC, and NG contributed to the conception and design of the study. MAP conducted and transcribed the interviews. MAP and JG analyzed the interviews. NG and MC supervised the analysis. JSC reviewed the qualitative features. DM reviewed the features related to pediatrics and eating disorders. MK reviewed the features of personal recovery.

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Compliance with ethical standards

Conflict of interest All authors declare they have no conflicts of interest.

Ethical approval An independent ethics committee, the CEPAR (Comité d'Evaluation des Protocoles et d'Aide à la Recherche", translated as the committee to assess protocols and aid research"), approved the study under reference 2014-04. The study and its data collection and safeguard procedures were declared to the CNIL (*Comité Nationale Informatique et Liberté*", that is, the national data protection authority under the number: 2088262).

Informed consent Informed consent was obtained from all individual participants included in the study in accordance with the declaration of Helsinki.

Dissemination The initial results of this study were presented: At a congress of the IACCAPAP (International Association for Child and Adolescent Psychiatry and Allied Profession) on August 12, 2014, in Durban, South Africa. At the 3rd congress of "Lencephale", on January 21, 2015, in Paris, France. At the 14th International Congress of the ASRPG ("l'Association de recherche et de soutien de soins en psychiatrie générale," that is, the association for research and support for care in general psychiatry") in Paris, France.

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