

Developing an Illness-Staging Framework for Anorexia Nervosa Via Expert Consensus

Introduction

- Clinical staging frameworks propose a predictable progression of illness, with dissociable phases that have prognostic or treatment implications (Cosci & Fava, 2013)
- Using a stages of illness framework in anorexia nervosa (AN) may help define more homogeneous groups for research (Treasure et al, 2015)
- With a staging framework, it may be possible to examine biological markers and clarify the neuroprogression of illness

Aims

The goal of this study is to obtain expert consensus on behavioral, cognitive, and biological factors that identify hinge points between stages of illness in AN. This consensus-based framework can then be tested through empiric research.

Methods

Participants:

- 31 peer-nominated experts in the field of AN
- Expert defined as ≥ 10 years of experience in the field and membership in the Academy for Eating Disorders and/or Eating Disorders Research Society

Procedures:

- Delphi Panel Method (Linstone & Turoff, 1975): Three rounds of questions via Qualtrics, answered anonymously
- Round 1:** Open-ended questions to elicit comments on behavioral, cognitive, and biological components of stages (see Figure)
- Rounds 2 & 3:** Rated level of agreement on a 5-point Likert scale
- "Consensus" defined as $\geq 85\%$ in agreement (near consensus $\geq 75\%$ agreement)

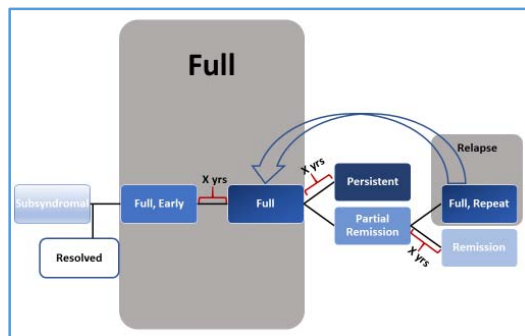


Figure 1. Round 3 Proposed Stages Based on Round 1 and 2, AN was proposed to progress from subsyndromal to AN, with consensus about a Persistent stage, as well as Remission. Early AN was agreed at the near consensus level (83%). Repeat Episodes can also occur after a period of Remission.

Conclusions

- General consensus about stages and progression of illness in AN
- Important clarity about behavior (restrictive eating) as a defining characteristic; less consensus about other features.
- As consensus does not imply data-based, to substantiate the value of such a model, numerous questions need to be addressed:
 - Can biological or clinical features distinguish the first 12 months of AN?
 - What are meaningful biological markers of weight restoration?
 - Can biological or clinical features delineate a Persistent stage? When is this distinction most appropriate?
 - Are there biological markers of Full Syndrome AN (other than BMI) that confer information about biology, severity, or treatment needs?

Results

Table 1. Agreement about Subsyndromal Stage of AN

Item	Agree
Restriction of food intake is a required component (Round 2 consensus)	94%
Cognitive component is as described in DSM-5	97%
Restrictive eating is mild to moderate	93%
Definition: Mild to moderate restrictive eating behavior and/or excessive exercise; not significantly underweight, and disturbance in body image	87%

Rejected components: EDE-Q score, excessive exercise only, other descriptions of cognitive component, meal avoidance

Table 2. Agreement about Time Frame

Item	Agree
In Early AN, symptoms are present for <1 year	90%
In Persistent AN, Full Syndrome is present for >3 years	77%
In Remission, symptoms are absent for > 1 year	97%

Rejected components: Early as < 3 year, Persistent as > 1 year, Persistent as "resistant to treatment"

Table 3. Agreement about Partial Remission and Remission

Item	Agree
Partial Remission includes not more than minimal restriction	93%
Remission includes abstinence from binge eating and/or purging	97%
Remission includes BMI ≥ 18.5 kg/m ² (or within 10% of expected for adolescents)	90%
Definition of Remission: Absence of restrictive eating, weight restoration, any body disturbance does not interfere with maintaining weight	97%

Areas of less agreement: At near consensus levels, definitions of Partial Remission included minimal restrictive eating, partial weight restoration, and presence of some body disturbance but possibly with improvement, and possibly including EDE-Q scores

Rejected components: Requiring BMI > 19.0 kg/m², time frames of 3 or 6 months for Remission, definitions that did not describe restrictive eating

Table 4.

Biological Marker	AN v SubAN	AN v Remission
Thyroid	73%	Rejected (<50%)
Gonadal hormones	Rejected (<50%)	67%
Menses	--	80%
Bone Density	87%	--
Transient Medical Complications	--	77%
Neutropenia	83%	--
Cholesterol	80%	--
Cortisol	83%	--
Heart rate/rhythm	67%	--