



Still waiting: referral patterns, delays, and key factors in accessing specialized eating disorder treatment in an Italian cohort

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ABSTRACT

Background: Eating disorders (EDs) are prevalent psychopathological conditions with significant psycho-physical consequences. Despite advances in diagnostic tools and treatment approaches, many patients experience barriers to accessing specialized ED care (SEDC). This study aimed to (1) examine the timeline of the care pathway from symptom onset to referral to a regional SEDC; (2) assess the association between referral to SEDC and factors such as the initial healthcare provider and clinical symptoms; and (3) investigate the relationship between the care pathway and clinical severity at the time of referral.

Methods: This study analyzed data from 174 patients accessing the SEDC in Bologna, Italy, between 2022 and 2024. Chi-square tests and Kendall Tau correlations were used to assess the associations between referral patterns, healthcare professionals, symptom severity, and healthcare contacts prior to referral.

Results: On average, participants took 26.3 months from symptom onset to seek help and 53.7 months before reaching the SEDC. General practitioners and psychiatric services had higher referral rates to SEDC. Weight loss and amenorrhea were positively associated with referrals, while depressed mood and fear of weight gain showed negative associations. No significant link was found between the care pathway and clinical severity at the time of referral.

Conclusion: Referral to SEDC is associated with the type of healthcare provider initially consulted and the presence of specific symptoms, particularly weight loss and amenorrhea. These findings highlight the importance of enhancing awareness among frontline healthcare providers to promote earlier recognition and referral of ED cases.

1. Introduction

Eating disorders (EDs) are psychopathological conditions marked by persistent, atypical eating behaviors that may significantly impact physical health and psychosocial functioning (American Psychiatric Association, 2014). In Western countries, EDs are estimated to affect 5.5%–17.9% of women and 0.6%–2.4% of men in early adulthood (Ghazzawi et al., 2023; Silén & Keski-Rahkonen, 2022). A major concern is their potential to become chronic, with relapse rates ranging from 30% to 50% (Keel & Brown, 2010). This chronicity contributes to severe health complications and high rates of psychiatric comorbidities, such as depression and anxiety, further interfering with recovery and increasing

the risk of premature mortality (Keel & Brown, 2010; Marcolini et al., 2023). Despite these risks, only 20% of affected individuals seek treatment (Treasure et al., 2020). Barriers to treatment include perceived stigma, shame, and financial constraints, among others (Ali & Fassnacht, 2023). These factors highlight the profound impact of EDs both on individual well-being and on public health systems, placing a significant burden on healthcare services due to the need for long-term, multidisciplinary care and frequent hospitalizations (Smink et al., 2012).

The gold standard for ED treatment is an integrated multidisciplinary approach, which combines psychotherapy, nutritional support, and pharmacological intervention when necessary (Joy et al., 2003; National Institute for Health and Care Excellence (UK), 2017). Intensive

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rehabilitation, whether in semi-residential or residential settings, is primarily aimed at addressing severe malnutrition and managing the instability of somatic and psychiatric comorbidities (Marcolini et al., 2024; Peckmezian & Paxton, 2020). Specialized outpatient facilities are considered the optimal setting for ED treatment, offering a structured yet flexible approach that allows for continuity of care while avoiding the disruptions associated with inpatient admission (National Guideline Alliance (UK), 2017). Compared to non-specialized local services, specialized outpatient facilities not only improve clinical outcomes and reduce treatment drop-out rates, but also help lower healthcare costs by reducing hospital admissions (Faller et al., 2024). Additionally, this approach enables patients to maintain their social and professional roles, fostering better long-term recovery and integration (Uniacke & Walsh, 2022).

Healthcare access in Italy is ensured through a universal public system that guarantees comprehensive medical services (Ricciardi & Tarricone, 2021). Since the psychiatric reform introduced by the Basaglia Law in 1980, mental health services in Italy have shifted from a hospital-centered model to a predominantly outpatient-based system, emphasizing community care, community-based services, and multidisciplinary interventions (De Fiore, 2018). Regarding EDs, national management is coordinated through a network of specialized treatment centers distributed across the country (Volpe et al., 2019). As of September 2024, a national mapping identified 180 dedicated facilities, including 132 treatment centers (105 within the National Health Service and 27 in the private sector) and 48 support associations (Istituto Superiore di Sanità, 2024). These centers provide various levels of care, with 92% offering outpatient services, 62% offering intensive outpatient or semi-residential programs, and 17% offering intensive residential rehabilitation (Istituto Superiore di Sanità, 2022). However, there are still significant regional disparities in the availability and integration of these services (Bruzzi et al., 2022).

Emilia-Romagna region stands out for its high healthcare standards, ranking first in Italy and third in Europe for healthcare quality, following the Netherlands and Switzerland (Clust-ER Health, 2025). While the region has long excelled in various medical specialties, there has been increasing recognition of the need to reinforce psychiatric care, including services for EDs, in response to increasing demand. Over 20 years ago, Emilia-Romagna implemented the Giuseppe Leggeri regional program, an initiative aimed at enhancing the integration between primary care and mental health services (Regione Emilia-Romagna, 2004). The program strengthened the role of general practitioners by providing training in early psychiatric diagnosis and establishing shared care pathways with mental health centers. Additionally, multidisciplinary teams—including psychiatrists, psychologists, nutritionists, and social workers—started to collaborate to ensure a personalized approach to psychiatric care, including ED treatment. This initiative has been pivotal in improving patient pathways and ensuring continuity of care, with general practitioners serving as key access points for specialized mental health services and facilitating timely intervention (Regione Emilia-Romagna, 2004). The program was among the first to emphasize the crucial role of primary care providers and mental health professionals in improving access to specialized psychiatric care, anticipating broader European trends (Monteleone et al., 2023).

Since 2024, Emilia-Romagna has been implementing a structured Diagnostic-Therapeutic Care Pathway (*Percorso Diagnostico-Terapeutico Assistenziale*, PDTA), establishing an integrated network of services coordinated across local health authorities and hospitals, despite constraints imposed by government funding reductions (Regione Emilia-Romagna, 2024). The regional framework for the PDTA prioritizes early identification, multidisciplinary intervention, and continuity of care, outlining a standardized approach that integrates general practitioners, mental health professionals, and specialized treatment centers to ensure timely and effective management of ED patients across different levels of care. Bologna, as the designated regional referral center for EDs and home to approximately 100,000 students

annually—a demographic particularly vulnerable to these conditions—exemplifies the necessity of accessible and specialized mental health services (University of Bologna, 2024).

This study, conducted at the regional specialized ED center (SEDC) in Bologna, Emilia-Romagna, Italy, aimed to (1) examine the timeline of the care pathway from symptom onset to referral to the SEDC, including the number of healthcare contacts encountered; (2) assess the association between referral to SEDC and factors such as the initial healthcare provider and clinical symptoms; and (3) investigate the relationship between the care pathway and clinical severity at the time of referral. Based on the heterogeneous severity of cases observed in our multidisciplinary clinic, including instances of extreme duration and severity, we hypothesized that despite Emilia-Romagna's well-structured healthcare system and increased awareness of EDs, the referral time to the SEDC may still exceed the national average of approximately 2.5 years (Volpe et al., 2019). We also expected that referral patterns could vary based on the type of initial healthcare provider, with some professionals more likely to refer patients than others, as well as by the presence of specific, more widely recognized symptoms. Additionally, we hypothesized that the organization of the care pathway leading to SEDC referral was associated with clinical severity at the time of referral, with longer delays and multiple healthcare contacts potentially contributing to more severe presentations upon arrival at the SEDC. Investigating these factors within a region known for its high healthcare standards, we aimed to gain further insights into barriers and delays in accessing specialized care for EDs.

2. Methods

2.1. Study design and recruitment

This single-center observational study was conducted between September 2022 and April 2024 at the regional SEDC, Local Health Authority, Bologna, Italy. The center serves as a reference facility for the region, providing multidisciplinary care for individuals with EDs.

The sample comprised 174 patients, each enrolled following the completion of informed consent and authorization for personal data processing. Participants were selected based on information from their medical records, using the following inclusion criteria: (a) a diagnosis of EDs according to DSM-5 criteria, (b) age over 18 years at the time of assessment, (c) adequate proficiency in Italian, and (d) provision of informed consent to participate in the study and consent for the use of their data for research purposes. Exclusion criteria were poor understanding of Italian language, ongoing psychotic disorders, or cognitive deficits.

2.2. Measures

2.2.1. Sociodemographic and clinical data collection

At the first psychiatric clinical visit to the SEDC, a trained research team member collected comprehensive information related to the sociodemographic background and the patient's care pathway prior to SEDC referral. Sociodemographic data, including age and gender identity, were collected using a structured questionnaire. Additional clinical information was obtained through a semi-structured interview based on the World Health Organization's Encounter Form (Gater et al., 1991; Volpe et al., 2014), a standardized tool designed to characterize the clinical pathways patients take to access specialized care. To ensure accuracy, these data were cross-referenced with medical records. Given that the treatment process follows a structured sequence—starting with the initial psychiatric assessment, followed by the first nutritional assessment within one month, and then the initiation of therapeutic interventions—body mass index (BMI) was recorded during the first nutritional assessment.

The assessment of the care pathway leading to SEDC referral included key time intervals, such as the duration between symptom

onset and the initial request for assistance, the interval between the initial request for assistance and arrival at the SEDC, the total duration from symptom onset to arrival at the SEDC, and the number of consultation steps taken before reaching the SEDC. To clarify symptom onset, we assessed the emergence of clinically significant, diagnosable ED symptoms based on DSM-5 criteria, measuring the time from this point to the moment the patient sought professional help. This approach aligns with the conventional definition of Duration of Untreated ED (DUEd). For instance, general body uneasiness or occasional dissatisfaction with weight and shape would not be considered the onset of an ED under this definition. Instead, the starting point was defined as the point at which symptoms first met the DSM-5 diagnostic criteria, including persistent restrictive eating patterns, recurrent binge eating episodes, compensatory behaviors (e.g., self-induced vomiting, excessive exercise), or intense fear of weight gain. This was determined based on patient self-reported symptom onset and/or the first documentation of symptoms in medical records. To define the end of DUEd, we considered the moment of admission into the SEDC, which is recognized as the gold standard for ED care (Joy et al., 2003).

Subsequently, retrospectively self-reported data were collected on the first-symptom onset, the type of healthcare professional consulted (e.g., general practitioner, psychologist, psychiatrist, nutritionist, or other specialist), the specific ED-related symptoms reported at each consultation stage, and the treatments or recommendations received. This information was gathered for up to three consultation stages preceding referral to the SEDC, with a minimum of one and a maximum of three stages per patient. To ensure accuracy, these reports were cross-referenced with medical records. Symptom documentation incorporated both standardized lists and free-text entries, integrating patient self-reported data with clinical documentation and medical records. Clinicians recorded symptoms using predefined diagnostic categories as well as narrative descriptions in free-text format, allowing for an inclusive clinical characterization based on both structured assessments and patient narratives.

A clinical diagnosis was formulated within the trimester following the first visit to the SEDC, based on the initial psychiatric assessment and subsequent clinical evaluations. This diagnostic process considered the patient's reported symptoms, medical history, and observations made by the multidisciplinary team during follow-up visits. Only individuals who received a confirmed DSM-5 diagnosis of an ED during this period were included in the study, ensuring that all participants met established diagnostic criteria.

2.2.2. Eating Disorder Examination Questionnaire (EDE-Q 6.0)

Eating symptoms were assessed with the Italian version of the EDE-Q 6.0, a self-report instrument derived from the Eating Disorder Examination (EDE), a semi-structured interview considered the gold standard for evaluating ED psychopathology (Calugi et al., 2017; Fairburn & Beglin, 1994; Fairburn & Beglin, 2008). It comprises 28 items organized into four subscales. The four subscales are: Eating Concern, Weight Concern, Shape Concern, and Restraint. These subscales are reflective of the core features of ED psychopathology (Fairburn & Beglin, 1994). The Global Score, representing overall ED psychopathology severity, was also computed as the average of all four subscale scores, providing a comprehensive measure of ED-related cognitive and behavioral symptoms. Participants were asked to indicate the frequency with which they had experienced ED-related symptoms over the preceding 28 days, using a 6-point Likert scale. Subscale scores were calculated as means, with individuals scoring above 2.8 classified as being at high risk for a clinical ED (Fairburn & Beglin, 1994).

Internal consistency of the EDE-Q 6.0 and its subscales was assessed using Cronbach's alpha, showing excellent reliability. The Global Score had an alpha of 0.92, Eating Concern 0.94, Shape Concern 0.93, Weight Concern 0.94, and Restraint 0.97.

2.3. Statistical analyses

Descriptive information was summarized as frequencies (N; %) for categorical variables and as mean (M) and standard deviation (SD) for continuous variables. Analyses of continuous variables for skewness, kurtosis, and normality distribution were performed using the Shapiro-Wilk test to determine the appropriateness of parametric or non-parametric statistical tests. To investigate the association between the type of healthcare professional initially encountered and referral to a SEDC, as well as the role of the patient's clinical condition (i.e. types of symptoms), we employed chi-square analyses and Kendall Tau correlations. To examine the extent to which the number of healthcare contacts and time before referral were associated with severity scores at referral, we conducted Kendall Tau correlations. Additionally, we performed these analyses separately for each ED diagnosis, splitting the sample to assess potential differences across diagnostic groups. Finally, we tested whether referral rates to the SEDC differed across ED diagnoses.

A power analysis was conducted to determine the minimum sample size required to detect a medium effect size with 80% power at a significance level of 0.05. The estimated sample size requirement was 88 participants for chi-square tests (Cohen's $w = 0.3$) and 176 participants for Kendall's Tau correlation analyses (Cohen's $r = 0.3$). While we acknowledge the limitations of a small sample size for certain variables, the chi-square assumptions were met, with at least 5 observations in 80% of the cells. To ensure the validity and reliability of the results, we refrained from conducting association analyses for groups with fewer than 8–10 participants and ensured that the sample size was adequate for detecting meaningful correlations. For analyses with sufficient sample sizes, statistical tests were selected based on data distribution and sample characteristics to maximize robustness and accuracy.

All analyses were performed using the Statistical Package for Social Sciences (SPSS) software, Version 24.0 (Armonk, NY: IBM Corp., 2016). Statistical significance was set at $p < .05$, with results interpreted cautiously in light of the sample size limitations.

3. Results

3.1. Sample characteristics

For detailed information refer to Table 1. The sample consisted of 174 participants with a mean age of 23.5 years (SD = 5.4, range: 18–47) and a mean BMI of 20 kg/m² (SD = 5.9, range: 11.6–52.6). Most participants were cisgender females (94.2%). Clinically, the mean EDE-Q Global Score at referral to SEDC was 3.9 (SD = 1.4), significantly exceeding the clinical relevance cutoff of 2.8, indicating substantial eating related psychopathology in the sample. The most common diagnosis was AN, accounting for 62.1% of cases. BN was the second most prevalent diagnosis, accounting for 26.4% of cases, followed by BED at 8%.

3.2. Care pathway leading to referral to a SEDC

For detailed information refer to Table 2. The average duration from symptom onset to the first request for assistance was 26.3 months, while the average wait time before reaching a SEDC was 53.7 months. On average, participants engaged with 4.2 different healthcare providers prior to receiving specialized care. The most frequently reported symptoms at the first consultation stage were restrictive behaviors (59.2%), weight loss (40.2%), and binge eating (35.1%), with similar patterns observed in subsequent consultation stages. Psychotherapists (32.8%) were the first professionals most commonly consulted, followed by nutritionists (22.4%). Only 17.8% initially sought assistance from SEDC. From a time course perspective, referrals to SEDC increased, with 23.6% of participants making their second consultation stage and 32.2% their third consultation stage to such centers. The professionals who had the highest referral rates across the three consultation stages were

Table 1
Sample (N = 174) sociodemographic and clinical characteristics.

Sociodemographic characteristics			
Variable	Minimum	Maximum	Mean ± SD
Age	18	47	23.5 ± 5.4
BMI	11.6	52.6	20 ± 5.9
Clinical characteristics			
Variable	Minimum	Maximum	Mean ± SD
EDE-Q Global Score	0.0	5.9	3.9 ± 1.4
EDE-Q Eating Concern	0.0	5.8	3.5 ± 1.4
EDE-Q Weight Concern	0.0	6.0	4.0 ± 1.6
EDE-Q Shape Concern	0.0	6.0	4.4 ± 1.5
EDE-Q Restraint	0.0	6.0	3.7 ± 1.6
Diagnosis			
Answer	n	%	
AN, unspecified type	55	31.6	
AN-BP	9	5.2	
AN-R	31	17.8	
AAN	13	7.5	
BN	46	26.4	
BED	14	8	
OSFED	6	3.4	

Legend. AFAB, Assigned Female at Birth; AN-R, Anorexia Nervosa Restricting Type; AN-BP, Anorexia Nervosa Binge-Purge Type; AN, Anorexia Nervosa; AAN, Atypical Anorexia Nervosa; BN, Bulimia Nervosa; BED, Binge Eating Disorder; OSFED, Other Specified Feeding or Eating Disorder; SD, Standard Deviation.

specialists in child and adolescent psychiatry (89.6% on average), general practitioners (78.6% on average), and specialists in adult psychiatry (52.6% on average). Initial treatments were often admissions to SEDC (42%), followed by psychotherapy (31%) and nutritional plans (24.1%).

3.3. Factors associated with referral to a SEDC

For detailed information refer to [Table 3](#). The chi-square analyses of referral patterns to SEDC across three consultation stages revealed significant differences in referral behaviors among healthcare professionals. In the first consultation stage, psychotherapists were the most frequently consulted with 26.3% of their cases referred to SEDC. Nutritionists were the second most common point of contact, with 17.9% referred, while specialists in child and adolescent psychiatry, the third most common interaction, had the highest referral rate at 68.8%. A significant association was observed between professional type and referral rates ($\chi^2 = 36.515, df = 8, p < .001$). In the second consultation stage, SEDC became the most common contact point, followed by psychotherapists and specialists in adult psychiatry. Specialists in adult psychiatry had a referral rate of 35.7%, while general practitioners had the highest referral rate at 85.7%. This stage also demonstrated a significant association between professional type and referral ($\chi^2 = 83.518, df = 12, p < .001$). By the third consultation stage, SEDC remained the most common contact point. Specialists in adult psychiatry had the highest referral rate at 72.2%, followed by general practitioners at 87.5%, and psychotherapists at 37.5%. The chi-square test again indicated a significant association between professional type and referral likelihood ($\chi^2 = 61.435, df = 7, p < .001$). Overall, specialists in adult

Table 2
Care pathway leading to SEDC referral.

Care pathway			
Variable	Minimum	Maximum	Mean ± SD
Number of months between first symptom and first help request	0	227	26.3 ± 34.4
Number of months between first help request and the arrival at SEDC	0	276	32.8 ± 45.1
Number of months between the first symptom and arrival at the SEDC	0	276	53.7 ± 50.1
Number of healthcare contacts before arriving at the SEDC	0	4	4.2 ± 1
Symptoms (first consultation stage)			
Answer	n	% of the total sample	
Restrictive behaviors	103	59.2	
Weight loss	70	40.2	
Binging	61	35.1	
Purging behaviors	60	34.5	
Fear of weight gain	34	19.5	
Depressed mood	22	12.6	
Body dysperception	21	12.1	
Overweight/obesity	8	4.6	
Socio-relational difficulties	6	3.4	
Amenorrhea	6	3.4	
Anxiety symptoms	5	2.9	
Fatigue	2	1.1	
Drug addiction	2	1.1	
Missing	0	0	
Restrictive behaviors	89	51.1	
Binging	68	39.1	
Weight loss	57	32.8	
Purging behaviors	56	32.2	
Fears of weight gain	33	19	
Depressed mood	23	13.2	
Body dysperception	10	5.7	
Overweight/obesity	8	4.6	
Social and relational difficulties	7	4	
Amenorrhea	6	3.4	
Anxious symptoms	5	2.9	
Drugs/toxic addiction	3	1.7	
Seizure-like activity during binge eating	1	0.6	
Self-harming behaviors	1	0.6	
Missing	27	15.5	
Restrictive behaviors	71	40.8	
Binging	53	30.5	
Purging behaviors	47	27	
Weight loss	46	26.4	
Fear of weight gain	26	14.9	
Depressed mood	16	9.2	
Body dysperception	7	4	
Overweight/obesity	6	3.4	
Social and relational difficulties	5	2.9	
Anxious symptoms	5	2.9	
Amenorrhea	4	2.3	
Fatigue	2	1.1	
Drug/toxic addiction	2	1.1	
Osteoporosis	1	0.6	
Missing	66	37.9	
Psychotherapist	57	32.8	
Professional (first consultation stage)			
Nutritionist	39	22.4	
SEDC	31	17.8	
Adult psychiatrist	16	9.2	
Child and adolescent psychiatrist	16	9.2	
General practitioner	8	4.6	
Hospital	3	1.7	
Gynecologist	2	1.1	
Gastroenterologist	1	0.6	
Missing	1	0.6	

(continued on next page)

Table 2 (continued)

	Answer	n	% of the total sample	
Professional (second consultation stage)	SEDC	41	23.6	
	Psychotherapist	36	20.7	
	Adult psychiatrist	28	16.1	
	Nutritionist	22	12.6	
	General practitioner	7	4	
	Child and adolescent psychiatry	3	1.7	
	Endocrinologist	2	1.1	
	Gynecologist	2	1.1	
	Private treatment center (unspecified setting)	2	1.1	
	Hospital	2	1.1	
	Private treatment center (RS)	1	0.6	
	Private treatment center (DS)	1	0.6	
	Neurologist	1	0.6	
	Missing	26	14.9	
Professional (third consultation stage)	SEDC	56	32.2	
	Adult psychiatrist	18	10.3	
	Nutritionist	10	5.7	
	General practitioner	8	4.6	
	Psychotherapist	8	4.6	
	Private treatment center	3	1.7	
	Hospital	3	1.7	
	Child neuropsychiatry	2	1.1	
	Missing	66	37.9	
	Treatment (first consultation stage)	Admitted to SEDC	73	42
Psychotherapy		54	31	
Nutritional plan		42	24.1	
Pharmacological intervention		16	9.2	
Referred to psychiatrist		4	2.3	
Referred to general practitioner		2	1.1	
Referred to psychotherapist		2	1.1	
Missing		20	11.5	
Treatment (second consultation stage)		Admitted to SEDC	72	41.4
		Psychotherapy	37	21.3
		Pharmacological intervention	23	13.2
		Nutritional plan	20	11.5
		Referred to psychiatrist	3	1.7
	Admitted to private treatment center (unspecified setting)	2	1.1	
	Referred to psychotherapist	2	1.1	
	Admitted to private treatment center (RS)	1	0.6	
	Admitted to private treatment center (DS)	1	0.6	
	Missing	42	24.1	
	Treatment (third consultation stage)	Admitted to SEDC	83	47.7
		Pharmacological intervention	15	8.6
		Psychotherapy	9	5.2
		Nutritional plan	8	4.6
Admitted to private treatment center (unspecified setting)		4	2.3	
Referred to general practitioner		1	0.6	
Missing		78	44.8	

Legend. EDs, Eating Disorders; RS, Residential Setting; DS, Daytime Setting; SEDC, Specialized Eating Disorder Centers.

psychiatry, general practitioners, and specialists in child and adolescent psychiatry were consistently associated with higher referral rates across all consultation stages.

Kendall Tau correlation examining the relationship between types of symptoms and referral to a SEDC revealed several significant associations. At the first consultation stage, positive associations were observed with weight loss ($r = 0.181, p = .017$) and amenorrhea ($r = 0.158, p = .037$), while a negative association was found with depressed mood ($r = -0.183, p = .016$). At the second consultation stage, weight loss remained positively associated with referral ($r = 0.170, p = .040$), whereas fear of weight gain showed a negative association ($r = -0.168,$

$p = .042$). At the third consultation stage, there was a positive association with binge eating episodes ($r = 0.208, p = .031$) and a negative association with body image distortions ($r = -0.197, p = .039$).

No significant differences were found in referral rates across different ED diagnoses.

3.4. Associations between the care pathway and clinical condition at referral

No significant associations were found between the number of months from the first symptom to the first help request, the number of months from the first help request to arrival at the SEDC, the total duration from symptom onset to SEDC referral, or the number of healthcare contacts before arriving at the SEDC and any of the EDE-Q subscales, including Global Score, Eating Concern, Weight Concern, Shape Concern, and Restraint.

4. Discussion

Our study examined referral patterns and factors related to access to SEDC treatment. Results showed that, on average, participants took just over two years from symptom onset to seek help and nearly four and a half years to reach a SEDC. The most frequently reported symptoms included restrictive behaviors, weight loss, and binge eating. Initial consultations were most commonly with psychotherapists or nutritionists, though referrals to SEDC increased as individuals progressed through the healthcare system, with a notable proportion reaching specialized care by their third consultation stage. Chi-square analyses revealed significant associations between provider type and referral patterns, with general practitioners, specialists in child and adolescent psychiatry, and specialists in adult psychiatry showing higher referral rates to SEDC. Certain symptoms, such as weight loss and amenorrhea, were more likely to lead to referrals, whereas symptoms like depressed mood and fear of weight gain were less frequently associated with referrals at different stages. However, no significant associations emerged between the care pathway prior to SEDC referral and clinical severity at the time of referral.

Our results indicate that the time from symptom onset to referral to an SEDC, the gold standard for ED treatment, is nearly two years longer than previously reported in Italy, where the average delay was estimated at around 2.5 years based on data from eight specialized treatment centers located in the cities of Catanzaro, Florence, Lecce, Milan, Naples, Padua, Turin, and Udine (Volpe et al., 2019). Our findings align with international literature suggesting that DUED and delays in accessing specialized care can range from 2.5 to 6 years (Austin et al., 2021; Flynn et al., 2021). This prolonged delay is particularly concerning, as the literature identifies a chronicity threshold for EDs between three and seven years, raising the risk that patients may become chronic while waiting for specialized treatment (Wonderlich et al., 2012). These concerns are further amplified by the rising prevalence of EDs, which increased from 3.5% of the general population between 2000 and 2006 to 7.8% between 2013 and 2018 (Galmiche et al., 2019). This trend suggests that the expansion of specialized ED services has not been sufficient or proportional to the growing prevalence of EDs, nor adequate to ensure timely access to specialized care (Piazza et al., 2016). This raises critical questions, particularly considering that the healthcare system in Emilia-Romagna is recognized as one of the best in Europe (Clust-ER Health, 2025). A possible explanation for this extended delay is that the study was conducted in the aftermath of the COVID-19 pandemic, which may have led to accumulated delays in referrals and access to care. Additionally, the pandemic itself had a profound impact on individuals with EDs, with multiple studies reporting an increase in ED cases and worsening symptoms during this period (Yu & Muehleman, 2023).

Our data show that certain professionals, such as general practitioners, specialists in child and adolescent psychiatry, and specialists in

Table 3
Chi-square analysis of referral patterns to Eating Disorder (ED) centers by healthcare professional.

First referral			
First healthcare professional	Not referred to SEDC (% of professionals)	Referred to SEDC (% of professionals)	Total
Psychotherapist	42 (73.3%)	15 (26.3%)	57
Nutritionist	32 (82.1%)	7 (17.9%)	39
SEDC	–	–	31
Child and adolescent psychiatrist	5 (31.2%)	11 (68.8%)	16
Adult psychiatrist	8 (50%)	8 (50%)	16
General practitioner	3 (37.5%)	5 (62.5%)	8
General hospital	2 (66.7%)	1 (33.3%)	3
Gynecologist	0 (0%)	2 (100%)	2
Gastroenterologist	0 (0%)	1 (50%)	1
Missing	–	–	1

First referral			
Chi-square value	Degrees of freedom		p-value
$\chi^2 = 36.515$	$df = 8$		$p < .001$

Second referral			
Second Healthcare Professional	Not Referred to SEDC (% of Professionals)	Referred to SEDC (% of Professionals)	Total
SEDC	–	–	40
Psychotherapist	31 (86.1%)	5 (13.9%)	36
Adult psychiatrist	18 (64.3%)	10 (35.7%)	28
Nutritionist	18 (81.8%)	4 (18.2%)	22
General practitioner	1 (14.3%)	6 (85.7%)	7
Child and adolescent psychiatrist	0 (0%)	3 (100%)	3
General hospital	1 (50%)	1 (50%)	2
Gynecologist	1 (50%)	1 (50%)	2
Endocrinologist	0 (0%)	2 (100%)	2
Neurologist	1 (100%)	0 (0%)	1
Private treatment center (RS)	1 (100%)	0 (0%)	1
Private treatment center (DS)	1 (100%)	0 (0%)	1
Missing	–	–	29

Second referral			
Chi-square value	Degrees of freedom		p-value
$\chi^2 = 83.518$	$df = 12$		$p < .001$

Third referral			
Third healthcare professional	Not Referred to SEDC (% of professionals)	Referred to SEDC (% of professionals)	Total
SEDC	–	–	55
Adult psychiatrist	5 (27.8%)	13 (72.2%)	18
Nutritionist	9 (90%)	1 (10%)	10
General practitioner	1 (12.5%)	7 (87.5%)	8
Psychotherapist	5 (62.5%)	3 (37.5%)	8
General hospital	1 (33.3%)	2 (66.7%)	3
Private treatment center	3 (100%)	0 (0%)	3
Child and adolescent psychiatrist	0 (0%)	2 (100%)	2
Missing	–	–	67

Third referral			
Chi-square value	Degrees of freedom		p-value
$\chi^2 = 61.435$	$df = 7$		$p < .001$

Legend. EDs, Eating Disorders; SEDC, Specialized Eating Disorder Centers.

adult psychiatry, were more frequently associated with referrals to SEDCs. This is likely a result of recent awareness efforts within the region and the impact of the Leggieri Program, which over the past 20 years has promoted the integration of primary care and mental health services (Regione Emilia-Romagna, 2004). These findings align with previous research highlighting the crucial role of general practitioners in the referral process (Monteleone et al., 2023; Volpe et al., 2019). Similarly, the association between specific symptoms, such as weight loss and amenorrhea, and higher referral rates may reflect increased awareness and recognition of ED symptoms among healthcare professionals (Regione Emilia-Romagna, 2004). The diffusion of standardized screening tools in primary care settings has possibly further facilitated the early identification of potential ED cases (Cotton et al., 2003; Morgan et al., 1999). This progressively greater interest in providing rapid and effective screening and diagnostic tools for EDs to medical figures who are not specialized in psychiatry, first and foremost general practitioners, has been of primary importance in Italy in the last years (Bevere et al., 2013).

A noteworthy finding is that, contrary to our initial hypothesis, we found no association between clinical severity at presentation to the SEDC and the duration of DUED. Several factors may explain this. First, the EDE-Q assesses *current* ED symptomatology, offering one operationalization of severity (Friborg et al., 2013). However, it does not capture the broader impact of EDs on functioning, quality of life, or physical health, where longer illness duration may still have significant consequences (Birmingham, 2011; Jenkins et al., 2011). Given this, it is reasonable that individuals with active EDs demonstrate similar EDE-Q scores regardless of DUED. Furthermore, the relationship between DUED and symptom severity may not follow a linear trajectory: existing literature suggests that ED symptom severity may be influenced by factors beyond illness duration, including individual differences in personality traits and biological predispositions (Fairburn et al., 2007; Spindler & Milos, 2007). Moreover, individuals with prolonged untreated EDs may develop adaptive mechanisms that enable them to manage certain symptoms, resulting in a more complex and heterogeneous symptom progression (MacNeil et al., 2012; McFillin et al., 2012). Consistent with this perspective, long-standing EDs may become embedded within an individual's self-concept, with ED behaviors being perceived not as health risks but as functional aspects of daily life (Orsolini et al., 2020; Wagener & Much, 2010). This limited insight into the severity of their condition, coupled with the fear that relinquishing ED behaviors would mean losing a fundamental part of their identity, often results in symptom minimization, treatment avoidance, or outright refusal (Marcolini et al., 2024; Vandereycken & Van Humbeeck, 2008).

4.1. Strengths and limitations

A key strength of this study is its examination of the care pathway in a large sample from a specialized regional ED center in Emilia-Romagna, a region known for its high healthcare standards, providing insight into barriers to care even within an advanced healthcare system. The inclusion of multiple healthcare consultation stages before SEDC referral allows for a detailed reconstruction of the patient journey. Furthermore, the retrospective approach, which integrates patient narratives with medical records, enhances the reliability of reported symptom onset and referral patterns.

However, the study has several limitations that must be considered. As it was conducted in a single city, Bologna, Emilia-Romagna, within the context of Italy's regionally structured healthcare system, findings may not be directly generalizable to other regions. Variations in referral pathways, resource allocation, and the implementation of specialized care models—such as the structured PDTA approach in Emilia-Romagna—could lead to differences in access to and effectiveness of treatment across regions. Additionally, data were collected immediately after the COVID-19 pandemic, a period marked by healthcare disruptions, which may have affected referral patterns and symptom severity in ways that

are not representative of typical conditions. Another important consideration is that we defined DUED as the duration between symptom onset and admission to the gold standard treatment at an SEDC; however, some individuals may have undergone alternative therapeutic interventions in the meantime that led to clinical improvement, as might be suggested by the lack of association between DUED and clinical severity. Moreover, our study did not include behavioral frequency items from the EDE-Q, which would have allowed for a more detailed assessment of specific ED behaviors. Additionally, we did not consider socioeconomic or demographic factors, such as income, education, and ethnicity, which may influence both ED onset and access to healthcare resources, potentially limiting our understanding of barriers to SEDC. Furthermore, as an observational study, we cannot infer causation, making it difficult to determine whether factors such as referral delays or specific symptoms directly affect the likelihood of accessing SEDC. Lastly, the absence of a longitudinal design prevented us from assessing whether a longer DUED leads to increased chronicity of the disorder.

5. Conclusions

In conclusion, our study highlights significant delays in accessing SEDC, with an average of approximately four years and six months from symptom onset to specialized care—nearly twice as long as previously reported in Italy (Volpe et al., 2019). Participants waited just over two years before seeking help for the first time, and initial consultations were most commonly with psychotherapists or nutritionists. However, referrals to SEDC increased as individuals progressed through the healthcare system, with a notable proportion reaching specialized care by their third consultation stage. Referral to an SEDC was associated with the type of healthcare provider initially consulted and the presence of specific symptoms, particularly weight loss and amenorrhea, while ED symptom severity was not linked to the care pathway. Existing literature highlights that a longer DUED increases the risk of chronicity. In the context of EDs, both societal and systemic factors, including the stigma surrounding these disorders, can further contribute to their persistence (Puhl & Suh, 2015; Tempia Valenta et al., 2024). Reducing delays in accessing specialized care is essential to preventing the internalization of dysfunctional behaviors, which, once ingrained, become more resistant to change. To address this, future regional and national policies should focus on training healthcare providers across all disciplines to recognize ED symptoms at an early stage and ensure timely, appropriate referrals. The integration of ED-specific screening tools into primary care and frontline healthcare settings could further facilitate early detection and expedite referral processes (Wade et al., 2022). Additionally, larger, multi-center studies are needed to validate these findings, investigate regional differences, and identify factors contributing to delays in specialized ED care. Given the prolonged duration before referral to an SEDC, improving awareness among non-specialized professionals may help reduce barriers to timely and specialized intervention.

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During the preparation of this work the authors used ChatGPT in order to improve the English grammar and refine the language of this manuscript. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article. ChatGPT was not used to contribute to the conceptualization, analysis, or content generation of the study. All ideas, data, and conclusions presented in this work are the authors' own.

CRediT authorship contribution statement

Silvia Tempia Valenta: Writing – original draft, Methodology, Formal analysis, Conceptualization. **Federica Marcolini:** Writing – original draft, Investigation. **Miriam Scalise:** Writing – original draft,

Investigation, Data curation. **Marco Verrastrò**: Investigation. **Michele Rugo**: Supervision. **Fabio Panariello**: Writing – review & editing, Conceptualization. **Diana De Ronchi**: Supervision. **Anna Rita Atti**: Writing – review & editing, Conceptualization.

Ethics approval

The present research was conducted in alignment with the regional guidelines established in the “Dossier No. 240/2014 - Regional Program for EDs - Contributions 2009- 2012.” The study was approved by the Local Ethics Committee (Prot. n 360–2022-OSS-AULSBO 05-18-2022) and conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and Good Clinical Practice guidelines.

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Declaration of competing interest

The authors declare no financial or personal interests that could influence the objectivity of the research.

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Data availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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