Why Eating Disorders Return: A Clinical Review of Habit Learning, Relapse, and Recovery

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Abstract

Eating disorders are often described in terms of their symptoms; however, the feature that actually defines them is the duration of their symptoms. Despite the awareness, motivation, and symptom-focused treatment individuals receive, eating disorder behaviors frequently recur, showing that existing models are not capable of comprehensively explaining why these behaviors are so challenging to change. This narrative review approaches eating disorders from an action-control perspective, separating goal-directed and habit-like forms of behavior. Using this framework, restrictive binge-eating and compensatory behaviors are viewed as learned action patterns. This review integrates research theories, transdiagnostic models of compulsivity, and clinical outcome studies to explain why eating disorder behaviors are challenging to modify and prone to relapse. Clinical findings related to ambivalence, limitations in evolutionary control, relapse patterns, comorbidity, and generalizations in treatment demonstrate why short-term, symptom-based treatment methods are ineffective. Viewing eating disorders as habitual behaviors is crucial for relapse prevention, long-term monitoring, and identifying behaviors, context, and clinical factors that need to be addressed in treatment.

Keywords: *Eating Disorders; Behavioral Persistence; Habit Learning; Relapse; Action Control; Treatment Resistance*

1. Introduction

Long-term outcome researches show that recovering from eating disorders does not have a simple path from illness to recovery, because some patients recover, some remain diagnosed, and for some the disorder occurs across years, since a lot of them go back and forth between improvement and relapse. These symptoms indicate they are in the recovery process, but it does not mean that the underlying issues have been resolved. In clinical practice, many individuals leave treatment prematurely because they believe they have recovered. However, they end up returning to similar eating disorder patterns. Most models focus on symptom, belief, and motivation aspects. Although these aspects are practical in describing the experience and creating a path for treatment, they are not good enough for explaining why eating disorders occur when they are established. Many individuals know the risks of the eating disorder

behaviors, but they find they struggle to stop themselves from pursuing them. The gap between the disorders and the knowledge, stemming from behaviors and thoughts, is because knowing these issues does not necessarily mean that the individual will always act on them. Walsh highlights this idea by stating that weight restoration itself does not lead to recovery from eating disorders coming back (Walsh, 2013). This review addresses this gap by portraying eating disorders as disorders of behavioral persistence, instead of focusing only on what the individual believes or intends to do; it views eating disorders as behavioral patterns that are learned. This paper will explain persistence in terms of action control characteristics and utilize this framework to provide evidence on addressing relapse, abnormalities, comorbidities, and limitations to treatment generalization. Consequences for long-term care and relapse could be addressed for prevention.

2. Methodology

This review uses a narrative style to combine evidence on behavioral persistence in eating disorders from an action control framework. Literature was selected by searches using large psychology and biomedical databases, such as PubMed and PsycINFO, with backward citation searches to find significant papers between August and December 2025. The search terms were primarily related to eating disorders, relapse and recurrence, habit learning, goal-directed control, compulsivity, and treatment generalization. Articles were chosen if they were peer-reviewed empirical studies or major theoretical papers. that successfully explained mechanisms of persistence or long-term results. Providing relevant evidence to action control processes, patterns of relapse or treatment generalization, and how well treatment generalization and high amounts of monitoring transfer to real-life clinical care were important factors in choosing the papers. Instead of making an in-depth review of all available studies, the selection process focused on creating conceptual coverage and providing theoretical relevance.

3. Literature Review

Persistence and the Limits of Symptom-Based Models

Results from long-term research show that some patients recover, some remain diagnosed, and many experience recurrence, even if they have periods of improvement (Keel & Brown, 2010). Keel and Brown (2010) report that anorexia nervosa remission ranges from 29% at short follow-up to 84% at long-term follow-up, with continued AN present in up to 18% of inpatient samples and crude mortality up to 8%, while bulimia nervosa shows remission rates above 70% by 10 years but remains chronic in about 1 in 10 patients, and approximately 25% of bulimic-spectrum EDNOS cases follow a chronic course (Keel & Brown, 2010). Current models describe eating-disorder behaviors and the underlying beliefs, but they do not explain why these behaviors persist once they begin. The continued presence of eating disorders is a serious challenge for theories of treatment. For example, weight regain during anorexia nervosa treatment does not make the eating disorder behaviors disappear, which can lead the person to fall back into the disorder. (Walsh, 2013).

A lack of understanding or effort cannot explain the behaviours and thoughts, because many individuals recognize that their behaviour is risky and they want to change; however, they still find themselves stuck in the same patterns. Over time, eating-disorder behaviors get stronger and more complex, which makes it hard to change, especially when they involve strict rules and repeated actions (Klein & Walsh, 2004; Walsh, 2013). By examining these patterns, it becomes clear that the issue is not confusion. As a result, both clinical observations and long-term results data indicate that learning is a valuable means of understanding why the disorder persists. Eating-disorder behaviors that occur

repeatedly can develop into learned patterns that become stronger over time, especially when they provide a sense of pleasure or short-term relief (Klein & Walsh, 2004; Walsh, 2013).

Goal-Directed and Habitual Control

Control systems that change are different in how actions are learned, selected, and represented. Goal-directed and habitual systems are parallel to each other and compete for control over behavior, determining their relative influence according to changes in learning history, environmental stability, and task demand (Yin & Knowlton, 2006; Graybiel, 2008).

Similar behaviors can occur even though they have fundamentally different underlying reasons at various periods in the patient's or people's lives. Goal-directed behaviors are linked to both the action outcome and the value expected from the outcome. Actions are chosen according to what is believed to be the desired consequence, making the behavioral tendency adjust to the outcome value. (Balleine & O'Doherty, 2010).

This proves that their action is based on what they expect to happen, rather than something automatic to the situation. Thus, flexibility is an essential feature in goal-directed control because actions are chosen. As a result, the link between an action and its outcome becomes weaker, leading to a decrease in goal-directed responses, even in situations where the physical demands of the task remain constant (Yin & Knowlton, 2006).

Goal-directed behavior necessitates a precise understanding of the relationship between actions and outcomes, instead of relying on learning stimulus-response patterns or simple repetitions, which allows goal-directed control to make the behavior adjust according to the demands of a changing environment. At the same time, goal-directed actions require mental effort because choosing an action and an individual selecting actions based on anticipated outcomes involve combining information and outcome value. The strength of the relationship between action and outcome depends on current goals and requires the use of working memory, planning, and executive control systems (Rangel et al., 2008).

From a neural perspective, this type of control requires associative corticostriatal circuits. This involves the prefrontal cortex and dorsomedial striatum, which are essential areas for the sensitivity to outcome devaluation and contingency degradation (Yin & Knowlton, 2006; Balleine & O'Doherty, 2010).

As a result, the goal-directed control is vulnerable. Because it requires ongoing evaluation, especially in situations where excessive training or highly stable environments are present, these situations can cause behavior to shift towards a more automatic form of control, characterized by a more automatic aspect of control (Graybiel, 2008). This distinction is clinically relevant because behaviors that shift from goal-directed to habitual control become less sensitive to outcomes, making them harder to modify even when goals, beliefs, or motivation change.

Table 1 summarizes the main behavioral features, experimental models, and control systems that separate goal-directed action from habit-like responding, providing a helpful guide for understanding how eating disorders could lose sensitivity to outcomes and become less sensitive over time.

Table 1. Goal-Directed vs Habitual Action Control: Core Signatures, Tests, and Circuit

Feature	Goal-directed control (A–O / R–O)	Habit-like control (S–R)	Connection to ED persistence
Associative Structure	Actions are chosen because of the expected outcome	Behavior triggered automatically by cues	Knowing it is harmful but still doing it.
Outcome Devaluation	Outcome losing value stops the behavior	Behavior continues despite devaluation	Changing value ≠ stopping behavior.
Contingency Degradation	Behavior stops when it is no longer working	Behavior persists even when ineffective	Consequences lost meaning.
Effect of Repetition	Early behavior is flexible	Repetition makes behavior automatic	Repetition strengthens routine.
Key Circuits	Control systems are evaluation-based	Routine-based control systems	Persistent behaviors are often driven by learned routines rather than current goals.

Habit Bias and Compulsivity

Different disorders, such as substance abuse disorder, obsessive-compulsive disorder, and related compulsive syndromes, have similar behavior patterns of repetition, continuity, and lack of sensitivity to the outcomes (Voon et al., 2014; Godier & Park, 2014). In all of these disorders, the behaviors continue even in cases where the relationship between the action and its outcomes changes, or negative interactions with consequences occur. This shows that compulsivity is connected to disruptions in the process, in actions being selected and done, rather than being a consequence of the specific beliefs or the context of the disorder itself. Because this pattern is a systematic response where an individual relies on a stimulus-response habit rather than the goal in the action selection, even in cases where flexible options are the better choice. In the contemporary action control framework context, this pattern is perceived as habit bias (Everitt & Robbins, 2005; Voon et al., 2014). From this perspective, habit bias explains the control mechanisms of behaviors, focusing on the underlying mechanisms rather than simply addressing symptom severity or motivational failures. Therefore, compulsive behavior intensifies in situations where dominant action overrides goal-directed control. This is most clear in substance use disorder because repeated drug use changes action-outcome learning to stimulus-response control, making important cues like outcome devaluation and punishment lose their sensitivity (Everitt & Robbins, 2005).On a similar note, obsessive-compulsive disorder also has impaired goal-directed control and excessive reliance on habits, making persistent responses even though the action is no longer needed (Gillan et al., 2016). Together, these findings show that obsessive-compulsive disorder has a shared behavioral phenotype with other compulsive disorders, rooted in action-control balance in different diagnostic periods (Robbins et al., 2012; Voon et al., 2014). Two factors that frequently emerge in understanding compulsive conditions affecting habit dominance are repetition and stress. Excessive repetition makes stimulus-response associations stronger, which increases how automatic the behavior is and reduces how sensitive it is to outcomes. Similarly, stress makes the biases extend by making control towards habitual responding and making goal-directed processes weaker (Everitt & Robbins, 2005; Voon et al., 2014). These factors in these different disorders make the case for habit-based models a strong explanation for behavioral persistence. This overlaps with support for shared learning mechanisms without making the disorders sound.

Eating Disorders as Persistent Learned Behaviors

What keeps eating disorders going is the repeated eating behavior itself. In different diagnostic systems, eating disorders have their own category that is separated from psychopathology because of patterns like binge eating, restriction, and compensatory behaviors (Walsh, 2011; Keel et al., 2011). Even in discussions for DSM about eating disorders, the latest DSM-5 change was to make sure the usage of EDNOS was reduced (Keel et al., 2011). But it still is the most common diagnosis even after these changes. This shows that eating pathology is commonly present as a behavioral pattern and does not mean they should fit into one category (Fairburn et al., 2003; Keel et al., 2011). This is also supported by transdiagnostic models, since they share the same maintaining processes for different diagnoses. Eating disorders start as goal-directed behaviors, but transfer into an automatic form of behavior (Fairburn et al., 2003; Keel et al., 2011).

In anorexia nervosa, restriction is the dominant behavior. Walsh describes it as starting with minor restrictions that might look like innocent restrictions, but they could become something bigger and dangerous that is resistant to change, like a maladaptive habit. (Walsh, 2013). This happens when the behavior turns into something that is stimulus-response-based and less sensitive to outcomes, becoming something that could even get triggered by cues, even in situations where pursuing that outcome is neither rewarding nor helpful. (Steinglass & Walsh, 2006; Walsh, 2013). This could also be supported by neurobiological models, which suggest that altered reward processes and strong top-down control could exacerbate ongoing restrictions, even if they carry the risk of leading to starvation, and the dangers are apparent to the individual (Kaye et al., 2014; Walsh, 2013).

Most of the individuals understand the risks it causes, but they still pursue the action because of the short-term reinforcement described as a mechanism that reduces anxiety. At the same time, this hunger and dieting restrictions have more than a physical hunger aspect to them because they fulfill psychological needs (Kaye et al., 2014). Even though people could feel deprived because they are not eating what they want, or even in situations where they are not eating less than what a person is supposed to be, they might still feel deprived because their feelings are connected to the psychological reward system rather than actual calorie restrictions (Lowe & Levine, 2005). When these restrictions are constantly used with short-term relief or as a control mechanism, these behaviors become stable. Moreover, turns into a routine that keeps coming back (Walsh, 2013; Kaye et al., 2014).

Fairburn's Cognitive Behavior Model paints binge eating as a process where an individual has strict dieting rules, and when they even have a tiny slip-up, it makes them feel like they failed their diet, which makes them follow the cycle again and again (Fairburn et al., 2003), and the behaviors causes fear of weight gain which makes the unhealthy cycle keep going (Fairburn et al., 2003). Similarly, Berner and Marsh describe bulimia nervosa as a compensatory behavior connected to dysfunctions in dorsal frontostrial circuits, controlled self-regulation, and habit learning with reward-related circuits, which could be the reason why binge purge behaviors become a habit that's difficult to maintain over time (Berner & Marsh, 2014). However, it is essential to note that similar binge-eating behaviors could happen. It could happen without the need for deprivation. For instance, when access to the necessary food is restricted, it can be understood as deprivation and cue-triggered motivation, which is essential for understanding binge patterns (Lowe & Levine, 2005). Therefore, understanding behaviors correctly is vital. Directly, it is necessary because patterns such as restricted food choices and excessive food consumption are linked to relapse and worse long-term results (Steinglass & Walsh, 2006; Walsh, 2013)

Looking at this with the habit learning aspect of anorexia nervosa, it could be said that behaviors themselves can potentially turn into disorders. Over time, these learned routines are explained by

frontostriatal systems and learning processes, instead of as a lack of motivation or knowledge, making this account work beyond theory. (Berner & Marsh, 2014; Walsh, 2011).

Table 2 uses action-control frameworks to explain eating disorders, where actions that were goal-directed could become habit-like patterns, even if they do not align with the person's conscious intentions or desired outcomes.

Table 2. Eating-disorder behaviors as persistent learned action patterns

Repeating behavior	Early function (goal-directed)	Later pattern (habit-like)	Conclusions
Intensive Eating and Weight Loss	Thinness, weight loss, and control are priorities	Persistent patterns, cues, and stress-sensitive restrictions	Consistent restriction, knowing the harm
Intense Eating Habits	Managing Anxiety Around Food and Weight	Cue-driven repetitive habits	Relief-based routines that keep the behavior alive
Compulsive Exercise	Behavior stops when it is no longer working	Hard to Stop Patterns	Behaviors become hard to stop
Binge Eating (BED)	Early behavior is flexible	Increased habit bias	Eating becomes habit-driven
Binge–Purge Cycles	Control systems are evaluation-based	Repetitive compulsive cycles	Behaviors keep the disorder alive

Awareness, Ambivalence, and Limits of Volitional Control

Clinically, eating disorders are characterized by ambivalence since it is more than a simple resistance or lack of motivation. Ambivalence can be confusing from a person's perspective, as wanting recovery does not necessarily mean wanting to give up the meaningful experiences they perceive as valuable in the disorder (Williams & Reid, 2010; Manwaring et al., 2021). In anorexia nervosa, individuals described these restrictive behaviors as providing a sense of control, security, and emotional regulation, even though they understood that the physical damage they cause (Serpell et al., 1999), which proves that these experiences could become coping mechanisms and identity, instead of being viewed as unwanted behavior. This shows individuals could fear weight gain, loss of control, or emotional exposure, even though they can understand the long-term health risks this illness causes (Williams & Reid, 2010). As a result, this suggests that motivation is a dynamic and content-dependent state that changes over time, rather than remaining constant (Manwaring et al., 2021).

These internal conflicts demonstrate that knowledge does not always need to be applied in actions, even in cases where the individual wants to recover by planning treatment goals and expressing their desire to do so. They still may not act on those intentions when they have to make weight-related decisions or deal with emotional distress (Konstantakopoulos et al., 2011). Clinical work with treatment-resistant eating disorders reflects this by stating that awareness and agreement exist in situations where behavior change stays limited (Vitousek et al., 1998). This gap is caused by the difficulties of taking control over behavior in scenarios where there are high emotions, rather than problems with understanding.

This means that expressing motivation does not necessarily imply a strong case for improvement. Clinical data outcomes show that relapses commonly occur even after symptom remissions, which proves that knowledge and motivation are not enough. (Keel et al., 2005; Waller, 2011). For example, in anorexia nervosa, lower motivation after treatment and demotivation during the process of follow-ups result in higher relapse risks (Carter et al., 2012). These findings show that levels of volitional control exist far from acute treatment phases and causes for vulnerability, even when motivation is present (Waller, 2011).

Relapse as a Predictable Feature of Eating Disorders

A relapse should be viewed as a part of the process, rather than proof of an individual failing the treatment. In long-term prospective follow-up of adolescents with severe anorexia nervosa, relapse occurred after discharge for 29.5% of the patients before they achieved clinical recovery, and the risk was concentrated in the first 12 months post-discharge (Carter et al., 2012). At the same time, the same study shows that there is an essential change in relapse risk after the recovery is achieved (Carter et al., 2012). Because partial recovery back to relapse risks was observed in fewer than 10% of cases, and subsyndromal relapse in fully recovered patients was 7%. Moreover, return to full recovery was documented (Carter et al., 2012). This pattern shows that the clinical view of relapse is time-limited vulnerability, and it does not work out for every single person in the same way.

A similar perspective also works for understanding bulimia nervosa and binge eating disorders. For example, in a five-year community prospective study, the results showed high amounts of instability since each year one-third were re-admitted and one-third relapsed. Even when it had fewer participants, the rate of meeting a diagnostic criterion for bulimia nervosa was half and two-thirds. In the case of a five-year study, the rate of meeting a diagnostic criterion for bulimia nervosa was half and two-thirds, respectively. Moreover, many individuals had a clinically severe amount of an eating disorder at the assessment points. On the other hand, binge eating disorders in the same study showed better outcomes with better improvement and fewer relapses in the follow-ups. (Fairburn et al., 2000). Relapse risks also fit into an expansive psychiatric context. For example, Axis 1 comorbidity was common in samples for individuals who were seeking treatment for anorexia nervosa and bulimia nervosa, with rates of 73% in anorexia nervosa and 60% in bulimia nervosa. And 82% in mixed presentations (Herzog et al., 1992). From a long-term result perspective, psychiatric comorbidity predicted a poorer outcome for both binge-eating disorders and purging-type bulimia nervosa (Keel et al., 2005). The literature for anorexia nervosa gave a recovery rate of less than half recovery on average, and close to 20% remaining chronically ill with symptoms such as vomiting, bulimic symptoms, and purgative abuse (Steinhausen, 2002).

Context, Treatment Generalization, and Real-World Care

A common problem that has been asked consistently in this literature is what works for treatment, which is often described under particular research conditions that do not translate easily into real-life clinical settings. Most treatment trials are conducted with tightly structured protocols, including careful sample screening and extensive monitoring. While it is true that these tools improve treatment outcomes in the study, they may also overestimate the effectiveness of these treatments when applied to real-life situations that we encounter in everyday practice. Participation and retention problems are one of the most important aspects here are essential since in adult cases, for example, in adult cases with anorexia nervosa, there are high rates of difficulty with accepting the treatment and there are high amounts of dropout rates that could have severe consequences when it gets generalized like some authors even argued that randomized trials could be premature if the problems are not addressed directly (Halmi et al., 2005). Even when the studies are completed, people act differently from what the studies have shown. Treatment conditions occur often, especially in cases where chronic disorders exist that require

additional care for the patient. This makes it harder to observe how well the treatment effects go. (Gowers et al., 2007). However, it would be wrong to ignore the context because most of the interventions are done according to stepped or transitional care aspects, instead of isolated patient treatments. In the post-hospitalization study, the patients were only entered into their trials after they had regained at least 90% of their body weight, making it a structured inpatient setting. This proves that the results might work only in specific situations. Since they received the treatment after they already received intensive inpatient care, both conditions used medical monitoring with either CBT or nutritional counseling (Pike et al., 2003). Therefore, the treatment may not accurately reflect whether the patient begins regular outpatient care. Similarly, reviews for outpatient treatments for adults with anorexia nervosa show that substantial evidence of one treatment being better than the other is not present. These reviews also indicate that the way these treatments are implemented in different settings complicates the comparison of results (Zipfel et al., 2014). For example, in the ANTOP trial, BMI was the primary outcome of the treatment. However, the authors stated that BMI is only a single part of the recovery. This is important to note because showing a change in different psychological functioning or everyday life does not show the weight of the individual. This is a single piece of data, which is limiting for how these results could be reflected in the everyday life of these patients who are actually in the process of recovering. (Zipfel et al., 2014). How much training the clinician has, the experience they have, and the structure of the treatment also play a role. It is also essential to consider how many of these findings are helpful for an expansive perspective. In binge eating disorders, group CBT and group IPT are typically given in a centralized and structured format (Wilfley et al., 1993). The studies that combine medication with CBT focus on whether binge eating stops at the end of the treatment (Grilo et al., 2005). The long-term follow-up findings also shape the treatment environments, as the type of care received affects the treatment. (Wilson et al., 2002) For example, in studies for adolescents treated with intensive specialty programs, mobility levels were lower at follow-ups, which could show a connection to the intensity of the treatment rather than the outcomes of the treatment in typical treatment settings. (Strober et al., 1997). Finally, qualitative research proved that the treatments the individuals receive are heavily affected by the quality of the care they receive. The individuals who receive treatment are heavily affected by the personal treatment they receive, and the contextual factors in which they are involved make it challenging to standardize a treatment. Patients' description of psychodynamic psychotherapy in bulimia nervosa and therapeutic relationships affects how the treatments are understood and experienced, which makes it more limited to one-to-one generalization. (Poulsen et al., 2010).

Clinical Consequences for Long-Term Management and Relapse Prevention

Long-term data follow-ups show that there is a risk of relapse and chronicity for 10-15 years. And it also shows that the way recovery works changes according to the patient, according to the way recovery is defined (Strober et al., 1997). Diagnostic crossovers support this. Anorexia nervosa and bulimia nervosa are common and can happen in the first 5 years of the illness and can be reliably predicted from the initial diagnosis (Tozzi et al., 2005). Therefore, these patterns show that Traditional symptom-based treatment styles might not be able to understand the vulnerability of the situation, even in cases where the short-term results might look good. Comorbidity is not an issue that is extra because it is usually a part of the disorder that keeps increasing the relapse risk (Margolis et al., 1994). Chronic and poor outcome chances are also documented in anorexia nervosa follow-up cohorts (Bulik et al.,2000). In bulimia nervosa, a high percentage still continue to binge and purge for longer than a decade (Keel et al., 1999), and the follow-ups that were done after inpatient treatments show that symptom status could stay unstable over time, showing they are vulnerable to relapse like anorexia nervosa (Zeeck et al., 2011). In binge eating disorders, low recovery at 1-year follow-up, and needing extended lifetime support, and comorbidity make the binge frequency rates higher and are also associated with expansive psychopathology (Wilfley et al., 2007; Grilo et al., 2009). Clinically, all of these prove knowledge of the situation, symptom reduction, and short-term treatment should not be viewed as durable recovery. Even in

situations where weight and core symptoms improve, destructive eating patterns and general impairment should be viewed as clinically relevant. (Sysko et al., 2000) Moreover, comorbid psychiatric and medical problems could make the outcomes worse by being combined (Patel et al., 2018). Therefore, relapse prevention should focus on long-term monitoring and creating realistic plans to make the treatment sustainable and effective. Clinical predictions at discharge should also be considered clinically significant. (Fichter & Quadflieg, 2021) Reimagining eating disorders' definition as a consistent and high-reliance syndrome could affect the prognosis, relapse prevention, and clinical expectations directly by creating an environment for treatment that focuses on long-term management instead of limited-time solutions.

Table 3 combines long-term clinical results and findings to explain the need for sustained clinical monitoring by highlighting relapse risk, comorbidity, and instability over time. Table 3 also shows that symptom-based definitions and symptom-based recovery plans are insufficient to explain the need for long-term clinical monitoring.

Table 3. Clinical consequences for long-term management and relapse prevention

Long-term patters	What does the data show?	Why does this matter clinically?
Long periods of illness	Some individuals stay ill for 10 to 15 years, even though some recover.	Early improvement does not mean the disorder has fully recovered
Specific time relapse risk	Relapse risks are highest after early discharge	Follow-up care should focus on the post-discharge period
Outcome instability in BN	Behavior stops when it is no longer working	Behaviors become hard to stop
Ongoing binge–purge behavior	Early behavior is flexible	Eating becomes habit-driven
High rates of comorbidity	Mood, anxiety, and substance-use disorders are common	Behaviors keep the disorder alive
BED severity and comorbidity	Comorbidity causes impairment and worse symptoms	Relapse prevention should focus on more than just the eating behaviors
Limits of symptom-based outcomes	Weight or symptom change misses daily functioning	Recovery should require functional and behavioral change
Poor predictions at discharge	Clinicians struggling or failing to predict long-term results	Structured monitoring after discharge should be used

4. Future Directions

Future studies should use persistence models to create clinically measurable tests. Firstly, trans-diagnostic longitudinal designs should be able to successfully track progressions, damages, diagnostic crossovers, and relapse rates occurring over time. Catching short-term results, and then they stop succeeding. These studies should examine persistence as more than its symptoms since behaviors like cue

sensitivity and fixation to the behaviors, such as the same cues, routines, or decisions, resurface under stress, and should be successfully identified. Secondly, outcome definitions should not focus on the features of the disorders because, while weight restoration could be achieved in treatment, it does not mean the individual is healed, nor does it explain the functional issues or day-to-day struggles and aspects of the disorder's treatment. Therefore, future work should develop a recovery guide that combines symptoms, function, recovery, and the mechanisms of this behavior to determine whether this behavior becomes less cue-driven or more forceful in different cases. The effectiveness of treatment in real-life clinical circumstances should be considered in research. Third, relapse prediction windows should be more focused, particularly during the early post-discharge period. Methods to identify high-risk situations in real settings, such as combining repeated assessments with ecological methods, should be employed. Finally, comorbidity-informed models should be used to determine if specific patterns of co-occurrence can alter the learning and relapse process, which might impact the treatment process.

5. Discussion

The framework explains why eating disorder persistence cannot be attributed solely to beliefs, insight, or symptom severity. By creating the same behavior in stable environments, controls can shift to habit-like responses driven by cues, becoming less sensitive to outcomes and less flexible, making them harder to change. In the earlier sections, the action control framework explained why eating-disorder behaviors persist. By creating the same behavior in stable environments, controls could shift to habit-like responses. This habit bias has been described in different compulsive syndromes. It explains why restriction binging and purging turn into routines and inflexible behaviors instead of being a flexible decision, since eating disorders are not purely based on beliefs and attitudes, because they are learned automatic action patterns. (Everitt & Robbins, 2005; Voon et al., 2014; Godier & Park, 2014). Wanting to recover can coexist with de-eating behavior thoughts, such as concerns about emotional regulation or a sense of control (Serpell et al., 1999; Williams & Reid, 2010).

Patients may express a desire to recover; however, they might not be able to act according to their intentions in emotionally intense situations, thereby making this a challenge with limits in volitional control, rather than a lack of understanding or motivation (Vitousek et al., 1998; Konstantakopoulos et al., 2011). Motivation can also change over time and is not a reliable predictor of lasting behavioral change. When examining the outcomes, relapse does not come as a surprise (Manwaring et al., 2021).

The results from the long-term studies have shown instability in symptom patterns and high rates of recurrence, and similarity in diagnosis and persistence in binge-type behaviors. (Keel & Brown, 2010; Zeeck et al., 2011; Tozzi et al., 2005; Wilfley et al., 2007).

Outcomes from intensive specialty settings are not sufficiently objective or viable as routine outpatient treatments (Strober et al., 1997). Intensive research further supports this by demonstrating that the therapeutic relationship and treatment context influence how interventions are experienced, thereby limiting the one-to-one transfer of standardized protocols (Postel et al., 2010).

Finally, there are significant limitations in evidence bases since most of the research has been done on anorexia nervosa, have focused on anorexia nervosa, leaving other diagnoses without enough representation. The definition of recovery changes from multiple studies. Moreover, the usual symptoms, such as weight gain or short-term recovery, do not always translate into long-term functional and flexible recovery. However, the overall conclusion is consistent since it proves that symptom reduction by itself is not enough for permanent recovery. So, using durable recovery methods has a higher chance of success when the treatment uses long-term monitoring and relapse prevention that focuses on cues and situations that try to stop learned eating disorder patterns.

Conclusion

In conclusion, defining eating disorders by their symptoms is not enough, and there should be more focus on the behavioral and the duration of the symptoms because an individual having awareness, motivation, and symptom-focused treatment does not translate into full recovery in today's existing treatment models. Eating disorders do not have a simple path for recovery since they are repetitive and relapse-occurring disorders. In the long term, restriction, bingeing, and purging become repetitive patterns that are specific in contexts, creating a pattern that's hard to change, even if the patient knows that their behavior is harmful. These situations can create short-term changes, but this does not necessarily mean that there is sufficient improvement for a durable recovery. To ensure that generalization does not lead to treatment failure, symptom-focused treatments and relapse prevention should be used in conjunction, taking into account the context of the patient's illness and disorder, as the results vary significantly for each patient. There should also be long-term monitoring to identify learned patterns and prevent them from developing, ensuring that eating disorder behaviors do not become ingrained. Feature research should use test models that test persistent models, that is, clinically measurable and usable. Therefore, using tri-diagnostic longitudinal designs would be beneficial to track symptom changes, diagnostic crossover, and relapse that occur in different years.

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