The Core Threat Structured Interview

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Abstract

Core threats, the ultimate feared consequences underlying avoidant behaviors, often underlie pathological anxiety. For example, contamination fears can be driven by core threats such as death, harming loved ones, or disgust. Despite their clinical importance, core threats are under-researched. This study is the first systematic examination of core threats, via a standardized semi-structured interview, the Core Threat Structured Interview (CTSI). Core threats were examined via face-to-face and online formats in four samples. Across studies, the CTSI demonstrated robust reliability (e.g., interrater, test-retest) and validity (convergent, divergent). In addition, a reliable coding scheme was used to categorize core threats. Results revealed that core threat themes were distinct from proximal threats, and were stable. Different obsessions in the same individual sometimes had shared core threats. By enabling individualized assessments, we were able to provide a nuanced approach to understanding anxiety, paving the way for research into the motivational mechanisms driving fear.

Keywords: Core threats, Motivation, Measurement

₂₈   **The Core Threat Structured Interview**

₂₉   Happy families are all alike; every unhappy family is unhappy in its own way.

₃₀   *Leo Tolstoy, Anna Karenina*

₃₁   A patient walks into the clinic. You can immediately see her careful demeanor and

₃₂ chafed hands. She reports that she compulsively washes her hands, that she doesn't go to

₃₃ public restrooms, and that she carefully cleans doorknobs before touching them. What is she

₃₄ afraid of? When asked, she says that she is afraid of being contaminated. But is

₃₅ contamination the true threat underlying her fear? Initial reports of a patient's fears often

₃₆ mask deeper concerns (Borkovec et al., 1998). This patient might fear becoming sick and

₃₇ dying, contaminating her loved ones, being deemed disgusting and rejected, or simply

₃₈ suffering. The key is that we can't know the true threat until we ask.

₃₉   These underlying concerns, known as core threats, are also referred to as core fears,

₄₀ catastrophic beliefs, or central innately aversive outcomes. Core threats are central to

₄₁ treating anxiety disorders (Huppert & Zlotnick, 2012; Zlotnick & Huppert, 2025). Many

₄₂ clinicians recognize the importance of understanding core threats to inform effective

₄₃ interventions (e.g., Craske et al., 2022; Gillihan et al., 2012; Murray, Loeb, et al., 2016;

₄₄ Pinciotti et al., 2021). However, despite their significance, clinical guidelines for identifying

₄₅ and addressing core threats remain limited. This paper aims to fill this gap by offering

₄₆ practical guidelines and exploring the phenomenology of core threats.

₄₇ **What are Core Threats?**

₄₈   Fear and anxiety are adaptive responses to perceived threats. The nature of these

₄₉ threats often follows a hierarchical pattern. Consider a jungle, where dangers such as

₅₀ venomous snakes, prowling lions, or quicksand abound. In this context, the jungle represents

₅₁ the proximal threat, the immediate signal of danger. However, the core threat—the ultimate

₅₂ feared outcome—is death (for example). It is the plausibility of death that makes the jungle

threatening and evokes fear.

Core threats arise from the interplay between what individuals *expect* (e.g., the likelihood of death) and their evaluation, or the *meaning* that they assign (e.g., the significance or consequences of potential death). This framework helps explain why the same situation may evoke different core threats for different people. For instance, individuals might *expect* different dangers but assign a similar *meaning*: one person in the jungle may *expect* to encounter a snake, while another *expects* a lion, yet both perceive the ultimate threat (meaning) as death. Conversely, individuals might *expect* the same danger but assign different *meanings*: for someone *expecting* an encounter with snakes, the *meaning* might center on their unpredictability, for another on their sliminess, for a third on the immediate risk to their life, and for yet another on the broader impact of their potential death on loved ones.

These distinctions are critical when examining anxiety disorders (e.g., Gillihan et al., 2012; Murray, Loeb, et al., 2016; Pinciotti et al., 2021). In pathological anxiety, seemingly benign stimuli are perceived as dangerous. To determine their safety, it is essential to understand the specific nature of the threat attributed to them (Craske et al., 2022; Gillihan et al., 2012; Huppert & Zlotnick, 2012; Murray, Loeb, et al., 2016). Consider an individual who fears blood. If their core threat involves the stress of encountering blood-like stimuli, exposure to sheep blood might be effective. However, if their primary fear centers on contracting AIDS, such exposure would likely be ineffective. The same principle applies to thought challenges and behavioral experiments.

A significant challenge in safety learning is its limited generalization across contexts (see Bouton, 2002). By focusing on core threats, clinicians can identify the most threatening aspects of feared stimuli, thereby promoting better generalization of safety learning across contexts (Gillihan et al., 2012; Zlotnick & Huppert, 2025). Identifying core threats also enhances clinicians' understanding of patients' experiences when confronting their fears. This

understanding fosters a sense of being supported for the patient and provides a coherent

narrative to explain their pathological behavior. Consequently, determining core threats can

significantly shape the trajectory of psychotherapy—from the initial case formulation

(Persons, 2012) to the implementation of specific interventions like exposures, thought

challenges, or behavioral experiments.

Determining Core Threats

Accurately identifying core threats is a complex process. It requires a clear

understanding of what core threats are and the types of questions best suited to uncover

them. A semi-structured interview can be a useful tool for this purpose (Samuel et al., 2020),

offering benefits for both clinical and research applications. In clinical settings, such

interviews help therapists identify the specific motivations underlying anxiety-related

behaviors. This, in turn, facilitates the development of a clear case formulation (Persons,

2012) and enables the creation of tailored interventions (e.g., Gillihan et al., 2012; Murray,

Loeb, et al., 2016; Pinciotti et al., 2021). In research, semi-structured interviews ensure

consistency and accuracy, reducing ambiguity in identifying core threats and enhancing the

reliability and validity of findings. Moreover, these interviews allow the assignment of

probability and threat values to both proximal and core threats. Tracking these values across

treatment can provide valuable insights into therapeutic change and its relationship to other

constructs.

The Catastrophizing Interview

The catastrophizing interview is a well-established procedure for investigating

catastrophizing in Generalized Anxiety Disorder (GAD) and related disorders (Davey, 2006;

Vasey & Borkovec, 1992). Developed by Vasey and Borkovec (1992), the procedure is based

on the decatastrophizing technique used in cognitive therapy (Kendall & Ingram, 1987). The

interview consists of two phases: topic generation and catastrophizing. During topic

generation, participants list their current worries, rate the percentage of time spent worrying

about each topic, and evaluate its significance. The topic with the highest percentage is then

selected for the catastrophizing phase. Participants are asked, "What is it about [selected worry topic] that worries you?" and then, "What about [participant's response] would you find fearful or bad if it did actually happen?" This questioning continues until participants either refuse to continue, cannot generate further responses, or repeat the same response three times.

The procedure was later refined to improve standardization (Davey, 2006). Participants were instructed to write concise, single-sentence responses for each step on a response sheet. Examples of typical catastrophizing steps were provided beforehand to familiarize participants with the process. These updates reduced variability in responses and enhanced accessibility. Initially designed for GAD, the procedure was later adapted for worry in insomnia (Harvey & Greenall, 2003) and rumination in depression (Watkins & Mason, 2002). It primarily assesses the tendency to perseverate in worry by quantifying the number of catastrophizing steps.

While effective for measuring perseverative worry, the catastrophizing interview is not designed to identify the underlying threat that triggers fear. Investigating core threats requires a distinct approach focused on uncovering the ultimate fear driving anxiety. To address these challenges, we developed a tailored interview specifically for identifying core threats.

The Core Threat Structured Interview

The Core Threat Structured Interview (CTSI) begins by identifying a focal proximal threat[1]. This involves identifying situations or stimuli that induce fear or are avoided, and any rituals or safety behaviors the individual engages in. Once a set of fear responses is identified, participants select the situation that causes the most distress or negative impact on their lives.

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[1] The CTSI manual can be found in the supplementary materials.

130 To identify core threats, the CTSI adapts the classic "downward arrow" technique
131 (e.g., Dugas & Koerner, 2005). Unlike the traditional focus on chains of beliefs (J. S. Beck,
132 2011), the CTSI emphasizes events, guiding participants through the question, "And then
133 what would happen?" (Huppert & Zlotnick, 2012). Participants are first asked what they
134 fear will happen if they refrain from avoidance or safety behaviors related to their chosen
135 proximal threat. Follow-up questions such as "And then what?", "What is so terrible about
136 that?", and "What does that mean to you?" are used to explore progressively deeper fears
137 (J. S. Beck, 2011; Leahy, 2003). Through this iterative process, the interview continues until
138 the underlying core threat is identified.

139 Core threats consist of an *expectation* that an event could occur and an *evaluation*
140 that the event would be catastrophic (Zlotnick & Huppert, 2025). These roughly translate to
141 likelihood and cost (e.g., Foa & Kozak, 1986). The evaluation depends on an individual's
142 unique values, goals, and motivations. Therefore, it is helpful to ask not only what might
143 happen but also what the event would *mean* to them or why it matters so much. This
144 approach often leads in surprising directions (i.e., a form of guided discovery; Padesky, 1993).
145 For instance, one woman worried that her children were abusing drugs. When asked what
146 was so horrible about that, she explained it meant her children were not sharing everything
147 with her, which in turn signified to her that she was failing as a mother.

148 In practice, the link between proximal and core threats often follows a chain of
149 progressively more threatening outcomes. For example, an individual might state, "If I don't
150 wash my hands, I will be contaminated, leading to illness, which will hinder my ability to
151 function, and ultimately sabotage my career." Another individual might say, "A burglar
152 might break into my house, harm or kidnap my child, and I couldn't bear that, as ensuring
153 my family's safety and growth is the most crucial part of my life." In some cases, individuals
154 describe multiple possible outcomes. When this happens, they are encouraged to explore the
155 branch they find most threatening. The interview concludes when the participant cannot or

will not identify a deeper threat, or when further questioning becomes repetitive.

Importantly, these branches are highly idiosyncratic, and generic pathways are insufficient.

At times, individuals may "overshoot" their core threat, describing their response to it instead of the threat itself. For example, someone who fears their family dying in a car crash may upon further inquiry describe fear of falling into depression. In such cases, the core threat is likely their family dying. To clarify, the interviewer can explicitly compare the options: "What would be worse for you: having your family die or sinking into depression?" However, there are instances where the response is indeed the feared outcome. For example, an individual may fear becoming so disgusted or anxious that they can no longer function, care for their family, or maintain relationships. These nuances highlight the importance of careful exploration to accurately identify the core threat.

Getting at Deeper Motivations

Identifying core threats can be challenging, as simply asking what could happen is often insufficient. Understanding the processes that create discrepancies between proximal and core threats can help address these difficulties. Two key processes that interfere with identifying core threats are avoidance and difficulty accessing emotional cognitions. These two issues will be explored in detail below.

One explanation for the difficulty to uncover core threats is avoidance. Individuals may focus on immediate, proximal threats because confronting deeper, more global threats is distressing. Encouraging individuals to endure this discomfort and approach their fears can often facilitate access to core threats.

Another explanation involves the nature of underlying threats, which are often evident only in emotional reasoning or "hot" cognitions. These can be difficult to access in calmer, more reflective environments (David & Szentagotai, 2006; see Safran & Greenberg, 1982). To address this, clinicians use techniques designed to tap into emotional reasoning. In

the CTSI, individuals are encouraged to focus on their *feelings* rather than their "cold"

cognitive appraisals. Asking, "What do you *feel* might happen?" instead of "What do you

think might happen?" highlights the distinction between emotional and cognitive reasoning,

helping to uncover hidden core threats.

Another technique involves the use of imagery, which research shows evokes stronger

emotional responses than verbal processing alone (Holmes & Mathews, 2005, 2010). By

guiding individuals to imagine threatening scenarios vividly, clinicians can bring emotions

and memories to the surface, providing better access to hot cognitions. Together, these

techniques offer complementary pathways for uncovering the deeper motivations behind

anxiety-related behaviors.

Hypotheses

The current study examines the phenomenology of core threats as measured by the

CTSI. We propose the following hypotheses:

1. Core threats differ significantly from proximal threats.
    a. Core threats cannot be reliably predicted based on proximal threats.
    b. Core threats exhibit greater variability than proximal threats.
2. A single core threat often underlies and motivates multiple proximal threats.
3. Core threats remain stable over time, demonstrating consistency across repeated
    assessments.

By exploring the relationship between core and proximal threats and testing these

hypotheses through the CTSI, this study aims to deepen our understanding of the

fundamental processes that drive fear and anxiety disorders. These insights may contribute

to refining theoretical models and improving clinical interventions by emphasizing the role of

core threats in shaping anxiety-related behaviors.

Transparency and Openness

Preregistration

The study was pre-registered on AsPredicted (https://aspredicted.org/89j7-5m4t.pdf) after data collection was completed but before coding of threat types began. The pre-registration included hypotheses, methods, data collection procedures, and analysis plans, ensuring that the analyses were planned without influence from the raw data.

Several deviations from the pre-registered plan occurred:

1. We used three judges to categorize core threats instead of two to increase reliability. All judges coded the threats simultaneously, ensuring that the addition was not done to affect initial outcomes.

2. Due to the complexity of the data structure, we were unable to apply information methods (Theil's U) to assess the agreement between sets of threats. Instead, we used permutation tests, as described below to investigate the same hypotheses.

3. The third experimental group (high anxiety, online CTSI) was reported as two separate groups—Hebrew-speaking and English-speaking—due to demographic differences.

Data, materials, code, and online resources

Supplementary materials, including datasets, analysis scripts, and detailed methodological documentation, are available on GitHub at https://github.com/eladzlot/ctsi-2025-public. The datasets have been redacted to include only quantitative information to ensure participant confidentiality, as the core threats and other open-ended responses could potentially identify specific individuals.

Reporting

We report how we determined all data exclusions, all manipulations, and all measures in the study. This study involved an analysis of existing data rather than new data collection, thus we do not report how we determined the sample size for each study.

₂₃₀ *Ethical approval*

₂₃₁   All studies were approved by the ethical review board of the The Hebrew University

₂₃₂ of Jerusalem.

₂₃₃   **Methods**

₂₃₄ **Design**

₂₃₅   This study comprised four experiments, each involving distinct samples of

₂₃₆ participants who completed the CTSI. Experiment 1 targeted individuals with

₂₃₇ obsessive-compulsive symptoms, who participated in face-to-face interviews conducted via

₂₃₈ Zoom. Experiment 2 also employed Zoom interviews but focused on a transdiagnostic

₂₃₉ sample of individuals with high anxiety levels. Experiment 3 introduced a digital,

₂₄₀ self-administered version of the CTSI, allowing participants to complete the interview

₂₄₁ independently online. Experiment 4 replicated the methodology of Experiment 3 with an

₂₄₂ international, English-speaking sample. Given that results are presented in a similar fashion

₂₄₃ for each experiment, and it is useful to the reader to be able to see the results comparatively

₂₄₄ across the four Experiments, we present the unique methods for each of the four experiments

₂₄₅ below, and following this, we present the results of all four experiments simultaneously.

₂₄₆ **Measures**

₂₄₇   **Core Threat Structured Interview (CTSI):** The CTSI is a semi-structured

₂₄₈ interview developed to identify the core threats driving fear or anxiety in individuals with

₂₄₉ anxiety disorders. It includes a series of questions aimed at uncovering the central trigger of

₂₅₀ fear or anxiety, followed by a guided process (using a "downward arrow" technique) to reveal

₂₅₁ the underlying core threat, and concludes with a section focused on clarifying the idiographic

₂₅₂ meaning of the threat for the individual. The CTSI was administered face-to-face via Zoom

₂₅₃ in the first two samples, targeting individuals with OCD and transdiagnostic anxiety. For

₂₅₄ the last two samples, a self-administered online version of the interview was used. During

₂₅₅ Experiments 1 and 2, minor adjustments were made to refine the interview process; these

256 adjustments did not alter the fundamental structure of the CTSI or its aims. Both the

257 face-to-face and online versions of the CTSI are available in the supplementary materials.

258 **Data Analysis**

259 *Rating Threats*

260   This study addresses the extent to which different descriptions of threats are similar.

261 Specifically, we examine whether proximal and core threats align and whether core threats

262 remain consistent across time. To systematically assess this similarity, threats were

263 categorized, enabling structured analysis.

264   Our investigation is primarily focused on identifying the threats driving fear

265 responses. These threats are manifestations of the values motivating these responses

266 (Zlotnick & Huppert, 2025). While several taxonomies of basic values exist (see Austin &

267 Vancouver, 1996; Ryan, 2012 for reviews), none adequately cover the types of threats

268 commonly associated with fear, including Schwartz's taxonomy (1992), which was previously

269 suggested for organizing core threats (Huppert & Zlotnick, 2012). To fill this gap, we

270 developed a novel taxonomy of global motivations based on clinical insights, expert

271 consultations, and theoretical frameworks such as those advanced by Dweck (2017). This

272 taxonomy, detailed in Table 1, was used to code both proximal and core threats.

273   Three trained research assistants applied this taxonomy to categorize threats.

274 Motivations underlying threats are often complex and may arise from multiple sources. For

275 example, fear of contamination might stem from both concerns about sickness leading to

276 death and feelings of disgust. Coders identified the primary motivation underlying each

277 threat. When two motivations were equally prominent, both were recorded. If no clear

278 dominant motivation emerged or the threat description lacked clarity, the threat was

279 classified as ambiguous. This approach accommodates variability in how threats are reported

280 and interpreted. Agreement between judges or across threats was defined as sharing at least

281 one common motivation. Detailed coding criteria and instructions are provided in the

282 supplementary materials.

283   Coders were trained using external datasets not included in the current analyses.

284 Each judge independently coded the dataset, and discrepancies were resolved through

285 consensus discussions. This rigorous adjudication process ensured consistency in applying

286 the taxonomy.

Table 1

The Taxonomy of Values Used for Coding Threats.

Category of Drives	Description	Examples of Core Threats
Affiliation	The drive to form social or interpersonal bonds and avoid rejection.	Rejection, social isolation, loneliness, being alone, social awkwardness. This covers anything from family connections to wide social acceptance
Predictability	The drive to understand and make sense of one's environment.	Confusion, uncertainty, unpredictability.
Competence	The drive for effectiveness, capability, and practical functioning.	Failure, not knowing what to do, incompetence.
Agency & Control	The drive to have agency and be in control of one's self and environment.	Losing control, doing something unintended, helplessness.
Survival	The goal of staying alive.	Death of oneself, or a close other (survival by proxy).
Physical Comfort	The goal of avoiding physical discomfort or suffering.	Pain, injury, physical harm to self or close other (physical comfort by proxy)
Self-Image	The desire to maintain a positive self-image and avoid a negative one.	Feeling worthless, evil, or guilty. Feeling that I've let myself down.

Category of Drives	Description	Examples of Core Threats
Morality	The drive to behave ethically and uphold virtues.	Harming others, violating religious beliefs or morals.
Distress (in)tolerance	The desire to avoid psychological distress or discomfort.	Disgust, Not-just-right experiences, pure psychic pain.

287 Krippendorff's α was selected as the statistical measure of inter-rater reliability due to

288 its robustness and flexibility. This measure is widely used to assess consistency among raters

289 across various data types, including nominal, ordinal, interval, and ratio scales (Hallgren,

290 2012; A. F. Hayes & Krippendorff, 2007). Its ability to accommodate more than two raters

291 and handle missing data makes it particularly well-suited for our study, where raters

292 categorized mixed data types. Krippendorff's α values are interpreted as follows: values

293 between 0.60 and 0.74 indicate moderate agreement, suitable for exploratory research; values

294 between 0.75 and 0.84 reflect good agreement; and values of 0.85 or above signify excellent

295 reliability. These thresholds guided our interpretation of reliability within this study. As

296 pre-registered, ratings of "ambiguous" were treated as missing data in the computation of α,

297 as they do not represent a definitive decision about motivation. This decision ensures that

298 reliability estimates reflect only clear and specific categorizations. Sensitivity analyses

299 confirmed that this approach did not substantially affect the results. Further details of the

300 reliability scoring algorithm are provided in the supplementary materials.

301 ***Agreement***

302 This study examines the correlations between sets of threats, each consisting of one or

303 two categories. Traditional statistical measures, typically designed for single-category data,

304 are insufficient to handle the complexity of multi-category sets, necessitating an alternative

305 analytical approach. We calculated the rate of agreement, defined as the percentage of pairs

306 that share at least one category in common across all possible pairs to address this. This

307 relatively liberal criterion accounts for the inherent fuzziness in defining drives and

308 distinguishing between the primary and secondary motivations underlying anxiety.

309   While Theil's U was pre-registered as the information-theoretic measure to assess

310 agreement, we encountered difficulties applying it due to the complex structure of our data.

311 As a result, we switched to permutation tests, a non-parametric approach well-suited to

312 handling this complexity (Edgington et al., 2007). Unlike traditional methods, permutation

313 tests make no assumptions about the underlying data distribution. By repeatedly shuffling

314 the data, these tests generate a null distribution of the test statistic, enabling the

315 computation of p-values based on the proportion of permutations yielding a statistic as

316 extreme as, or more extreme than, the observed one (Ernst, 2004).

317   This method is robust for small samples like ours and circumvents the limitations of

318 standard analytical techniques, such as information-theoretic measures, which are ill-suited

319 to our data. We report the expected number of agreements, the empirical count of

320 agreements, and the likelihood (p) of obtaining the empirical count by chance, assuming the

321 expected count is accurate. Consistent with conventional statistical practice, $p < .05$ is

322 considered significant.

Motivational Diversity

324   Hypothesis 1b posits that core threats are associated with diverse motivations,

325 whereas proximal threats are not. To quantify this diversity, we employ a variation of

326 Simpson's Diversity Index (D; Simpson, 1949). D measures "unalikeability," or the

327 probability that two randomly selected members of a population will have different

328 motivations (Kader & Perry, 2007). It ranges from 0 to 1, where 0 indicates a completely

329 heterogeneous population and 1 indicates a maximally homogeneous population (all members

330 share the same motivations). For interpretability, we classify D values below 0.2 as highly

331 diverse, values between 0.2 and 0.4 as moderately diverse, and values above 0.4 as nondiverse.

332   While the standard form of D assumes discrete, mutually exclusive categories, our

333 data allows for overlapping motivations. For example, one threat might be driven by both

334 affiliation and survival, while another is driven solely by affiliation. To accommodate this, we

335 adapted the calculation of D to account for partial overlaps between motivations.

336 Specifically, we define $D = \frac{\sum \delta_{ij}}{N(N-1)}$, where: N is the total number of threats, δ_{ij} is the

337 agreement function, which returns 1 if the motivations of i and j overlap and 0 otherwise,

338 $i \neq j$ ensures that a member is never compared to itself.

339   A sample's diversity is considered greater than another if more than 95% of

340 bootstrapped D values for one sample exceed those of the other. Bootstrapping is employed

341 because it provides a robust, non-parametric method to assess variability and establish

342 confidence intervals for D values, making it ideal for our data's structure and sample size.

343 This approach allows us to directly test whether core threats exhibit significantly greater

344 motivational diversity than proximal threats, supporting or refuting the hypothesis.

345 **Methods: Experiment 1**

346   Experiment 1 aimed to evaluate the feasibility and potential utility of the face to face

347 CTSI for identifying core threats among individuals exhibiting high levels of

348 obsessive-compulsive (OC) symptoms.

349 ***Participants***

350   Participants were drawn from a pre-existing database of individuals who had

351 previously consented to participate in research and completed the OCI-R. A research

352 assistant contacted eligible participants and obtained informed consent.

353   Participants included 48 individuals, with 43 (89.58%) female and 5 (10.42%) male.

354 The mean age of participants was 24.60 years (SD = 3.20). The majority identified as Jewish

355 40 (83.33%), with others identifying as Christian 1 (2.08%) or non-religious 5 (10.42%). All

356 participants were Hebrew-speaking, with 41 (85.42%) reporting Hebrew as their mother

357 tongue. Ethnicity data were not explicitly collected, which is noted as a limitation of the

study. In the Israeli context, ethnicity is often closely aligned with religion, and participants'
religious identification may partially capture cultural background.

Marital status was distributed as follows: 40 (83.33%) single, 7 (14.58%) married, and
1 (2.08%) divorced. Educational attainment ranged from 2 to 4 years, with a mean of 2.70
years. 32 (66.67%) of participants were employed. Income was reported as a median of
5000-8000 ILS per month.

OCD symptom severity, measured using the OCI-R, had a mean score of 37.20 (SD =
11), with a median score of 38.50. The median OCI-R score (38.50) placed the majority of
participants well within the severe range of obsessive-compulsive symptoms (Abramovitch et
al., 2020). Moreover, 41 (85.42%) participants met diagnostic criteria for
obsessive-compulsive disorder (OCD) based on the DIAMOND interview.

Procedure

Participants completed a series of questionnaires followed by a semi-structured
interview conducted via Zoom, lasting between 45 minutes and two hours. The interview
included the OCD module of the DIAMOND and the CTSI. The CTSI was used to identify
core threats underlying two compulsions (proximal threats). To enhance variability, the
compulsions were chosen to be as dissimilar as possible (e.g., a cleaning compulsion versus a
checking compulsion). Interviewers explored participants' perceptions of what would occur if
ritualistic behaviors were not performed. Participants were compensated with approximately
$10 per hour or course credit, depending on their preference.

Measures

The face-to-face CTSI was employed to identify proximal and core threats. While
three independent judges initially scored each threat, inter-rater reliability was insufficient.
A consensus score was used for subsequent analyses to address this. This approach informed
the development of enhanced training protocols, which improved reliability in later
experiments. Despite initial limitations, the consensus scores are considered valid for the

384 purposes of this study.

385   **Obsessive Compulsive Inventory-Revised (OCI-R; Foa et al., 2002):** The

386 OCI-R is an 18-item self-report measure assessing the distress associated with

387 obsessive-compulsive symptoms using a Likert scale (0–4). It has demonstrated strong

388 psychometric properties across clinical and non-clinical populations (Foa et al., 2002;

389 Huppert et al., 2007). In this sample, the OCI-R exhibited high internal consistency, with an

390 omega coefficient of 0.90, supporting its reliability as a measure of OCD symptom severity.

391   **Diagnostic Interview for Anxiety, Mood, and OCD and Related**

392 **Neuropsychiatric Disorders (DIAMOND; Tolin et al., 2018):** The DIAMOND is a

393 semi-structured diagnostic interview developed to diagnose DSM-5 psychiatric disorders with

394 robust psychometric properties. For this study, only the OCD section was administered to

395 confirm OCD diagnoses. The DIAMOND has consistently demonstrated excellent inter-rater

396 reliability, test-retest reliability, and strong validity metrics (Tolin et al., 2018).

397 **Methods: Experiment 2**

398   Experiment 2 aimed to build on the findings of Experiment 1 by evaluating a

399 transdiagnostic population with elevated anxiety symptoms. A central objective was to

400 assess the test-retest and inter-rater reliability of the CTSI.

401 *Participants*

402   Participants were recruited from a database of individuals who had consented to

403 research and completed the STICSA. A research assistant contacted eligible participants and

404 obtained informed consent.

405   Participants included 42 individuals, with 40 (95.24%) female and 2 (4.76%) male.

406 The mean age of participants was 27.80 years (SD = 6.20). The majority identified as Jewish

407 (41 (97.62%)), with one identifying as non-religious (1 (2.38%)). All participants reported

408 Hebrew as their mother tongue. While ethnicity data were not explicitly collected, this was

409 noted as a limitation of the study. In the Israeli context, ethnicity is often closely aligned

410 with religion, so participants' religious identification may partially capture their cultural

411 background.

412   Marital status was distributed as follows: 34 (80.95%) single, 7 (16.67%) married, and

413 1 (2.38%) divorced. Educational attainment ranged from 2 to 4 years, with a mean of 2.80

414 years. Income was reported as a median of 8000-15000 ILS per month. Anxiety symptom

415 severity, measured using the STICSA, had a mean score of 20.90 (SD = 13.40).

416 *Procedure*

417   Participants completed the CTSI via Zoom in two sessions spaced approximately one

418 to two months apart (Median = 33 days; Range: 25–49 days). In the initial session, an

419 interviewer guided participants to identify and explore the fear they perceived as most

420 impactful. The second session replicated the procedure, focusing on the same proximal

421 threat but involving a different interviewer to assess inter-rater reliability. Each session

422 lasted 30 to 90 minutes. Between the two sessions, 5 participants (11.9%) withdrew from the

423 study. Participants were compensated with approximately $10 per hour or course credit,

424 depending on their preference.

425 *Measures*

426   The face-to-face CTSI was used to identify proximal and core threats, as outlined

427 above. Threats were scored by three judges who achieved good inter-rater reliability, with

428 Krippendorff's $\alpha = 0.84$.

429   **The Trait Inventory for Cognitive and Somatic Anxiety (TICSA; Ree et**

430 **al., 2008):** The TICSA is a validated 21-item self-report measure designed to assess

431 cognitive and somatic dimensions of trait anxiety. Each item is rated on Likert scale (0-3),

432 with higher scores reflecting greater severity of anxiety symptoms. The TICSA has

433 consistently demonstrated strong psychometric properties in diverse populations (Grös et al.,

434 2007; Ree et al., 2008). In the present study, the TICSA exhibited high internal consistency,

with an omega coefficient of 0.95.

Methods: Experiment 3

Experiment 3 aimed to build on the findings from Experiment 2 by employing a self-administered version of the CTSI, facilitating a more scalable and participant-directed assessment of core and proximal threats.

Participants and Procedure

Participants were recruited from a database of individuals who had consented to research and completed the TICSA. Each participant was contacted by a research assistant, who obtained informed consent before enrollment. A total of 81 participants completed the study online. TICSA symptom severity for the online sample had a mean score of 29.7 (11.3). Due to a technical error, participant demographic data were not recorded. However, given the similarity in recruitment procedures, the sample demographics are presumed to align closely with those of Experiment 2. Participants were provided with a secure link to complete the self-administered CTSI along with additional relevant questionnaires. Participants were compensated with approximately $10 per hour or course credit, depending on their preference.

Measures

The self-administered CTSI was used to identify proximal and core threats, as discussed above. Three judges scored each threat and achieved good inter-rater reliability (Krippendorff's $\alpha = 0.86$). The TICSA was used to measure anxiety, showing high internal consistency, with an omega coefficient of 0.91.

Experiment 4

Experiment 4 aimed to expand upon Experiment 3 by recruiting an international, English-speaking population.

Participants and Procedure

Participants were recruited via the Prolific platform for online research and compensated at a rate of £9 per hour. Screening focused on identifying individuals with high anxiety, defined as a score greater than 4 on the Overall Anxiety Severity and Impairment Scale (OASIS; Norman et al., 2006), and functional impairment, indicated by at least one item scored above 2 on the Work and Social Adjustment Scale (WSAS; Mundt et al., 2002). Exclusion criteria included severe depression (PHQ score > 14; Kroenke et al., 2009), significant post-traumatic symptoms (short PCL-5 score > 6; Zuromski et al., 2019), or psychotic symptoms (items 19 or 20 on the DIAMOND screener; Tolin et al., 2018). Additional criteria included fluency in English, no history of head injury or reading/writing difficulties (as indicated on the Prolific system), and experience on the platform with an approval rate above 95% and at least 300 prior submissions.

A total of 87 participants completed the study, with a mean age of 40.60 years (SD = 14.60). The sample was composed of 60 (68.97%) female and 27 (31.03%) male participants. The majority of participants identified their ethnicity as White 72 (82.76%), followed by Asian 9 (10.34%) and Black 6 (6.90%). Regarding educational and employment status, 14 (16.09%) of participants were students. Among the participants, 35 (40.23%) were employed full-time, 21 (24.14%) were employed part-time, and 5 (5.75%) reported being unemployed and seeking work.

STICSA symptom severity in this sample had a mean score of 7.80 (SD = 2.90). Eligible participants signed a consent form, completed a set of questionnaires related to a separate study, and then proceeded to the main experiment, which involved completing the self-administered CTSI.

Measures

The self-administered CTSI was used to identify proximal and core threats, as discussed above. Three judges scored each threat, achieving good inter-rater reliability

(Krippendorff's $\alpha = 0.80$).

The Overall Anxiety Severity and Impairment Scale (OASIS; Norman et al., 2006): was used to measure anxiety. This 5-item scale assesses the frequency, intensity, and impact of anxiety and fear over the past week, with responses ranging from 0 (Little or None) to 4 (Extreme or All the Time). Higher scores reflect greater severity, with a cut-off score of eight recommended for identifying anxiety disorders and a change of four points considered clinically significant (Moore et al., 2015). The OASIS demonstrated excellent reliability in this study, with an omega coefficient of 0.82, consistent with its strong psychometric properties reported in previous research (Norman et al., 2006).

Results

The Distribution of Threat Values

The distribution of values in core and proximal threats varied across experiments, with notable differences between the face-to-face and self-administered formats (see Figure 1). Proximal threats were more frequently rated as ambiguous compared to core threats. This discrepancy may stem from the CTSI's emphasis on exploring values, though participants were not explicitly instructed to frame their threats in these terms. A more plausible explanation is that the CTSI facilitates a clearer focus on core threats during the interview process.

Hypothesis 1: Proximal-Core Agreement

Hypothesis 1 was that core threats represent a distinct psychological process from proximal threats. To test this, we examined two key questions: whether core threats can be predicted based on proximal threats and whether core threats display greater diversity in content compared to proximal threats. Across all experiments, core threats matched their corresponding proximal threats in no more than 32.5% of cases, with the lowest agreement observed in Experiment 1 (High OC sample), where the rate was 16.9%. Among the transdiagnostic samples, agreement rates were slightly above chance. However, after
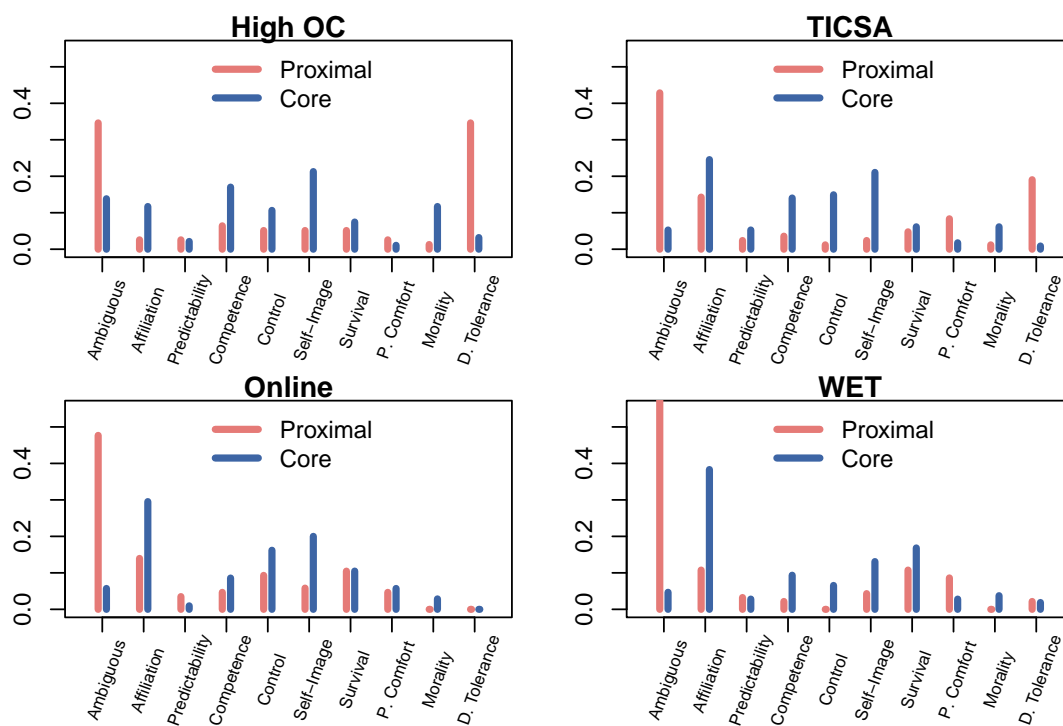
Figure 1

Distribution of Threat Values Across Experiments

applying the Holm-Bonferroni correction for multiple comparisons (Holm, 1979), only

Experiment 2 (face-to-face transdiagnostic sample) demonstrated a statistically significant

agreement between proximal and core threats. These results indicate that while proximal

threats may offer some information about core threats, the observed agreement rates, are

clinically insufficient. This finding supports the hypothesis that proximal threats do not

reliably predict core threats, as more than 70% of core threats differed from their proximal

counterparts.

The diversity of proximal threats, measured using Simpson's D, ranged from 0.30 to

0.46 across experiments. Core threats generally exhibited greater diversity than proximal

threats, with the exception of Experiment 2 (face-to-face high anxiety sample), where

diversity levels were equivalent. The difference was most pronounced in Experiment 1 and 4

(face-to-face high OC, and online English speaking). However, after correcting for multiple comparisons, only the diversity difference observed in Experiment 1 remained statistically significant. This analysis was not pre-registered and should be considered exploratory. The diversity metrics and detailed statistical results are presented in Table 2.

After identifying core threats, participants were asked whether these threats reflected their underlying motivation for fear. This assessment was conducted in the three trans-diagnostic samples but not in the OCD sample. The full results are presented in Figure 2. Across all experiments, the majority of participants affirmed that the identified core threats accurately represented their motivation for anxiety. Notably, the proportion of participants endorsing the core threat as their "true" motivation was consistent regardless of whether the proximal and core threats aligned or the identified core threat reflected a different motivation. A significant proportion of participants expressed uncertainty about whether the identified core threat truly captured their underlying motivation. However, this uncertainty was less prevalent in the self-administered versions of the CTSI, suggesting that the self-administered format may facilitate more confidence in the identification of core threats. This analysis was not pre-registered and should be considered exploratory. While the results are intriguing and suggest potential avenues for further investigation, they require replication and confirmation in future research.

Hypothesis 2: Multiple Proximal Threats and One Core Threat

Hypothesis 2 was that one core threat often motivates multiple proximal threats. We investigated this in Experiment 1 by administering the CTSI for two distinct compulsions (proximal threats). Only 13 (27.08%) individuals identified core threats for both compulsions. This limited identification often occurred because participants became fatigued and impatient by the time they were interviewed about the second compulsion. Consequently, our data on this topic is both limited and potentially biased (e.g., is there a relationship between participants' persistence and the characteristics of their fears?).

Table 2

Agreement and Diversity Statistics Across Studies

	Interview		Self-administered	
	High OC FTF	TD FTF	TD Online (He)	TD Online (En)
Agreement				
N pairs	71	78	77	84
Expected Agreement (%)	14 (19.72%)	16 (20.51%)	18 (23.38%)	22 (26.19%)
Actual Agreement (%)	12 (16.90%)	23 (29.49%)	25 (32.47%)	24 (28.57%)
p Agreement	.759	.031	.049	.302
Diversity (D)				
Proximal threats	0.31 [0.25, 0.38]	0.30 [0.23, 0.38]	0.34 [0.27, 0.45]	0.46 [0.36, 0.58]
Core threats	0.24 [0.20, 0.29]	0.31 [0.25, 0.38]	0.31 [0.25, 0.40]	0.33 [0.26, 0.42]
p Diversity	.038	.584	.294	.040

Note. Agreement reflects the count of expected and actual pairs of motivations aligning (p Agreement indicates the likelihood of observing this agreement by chance). Diversity is measured using the Simpson Diversity Index for proximal versus core threats (p Diversity represents the probability that core threat diversity exceeds proximal threat diversity).OC - obsessive compulsive, FTF - face to face, TD - Transdiagnostic, He - Hebrew, En - English
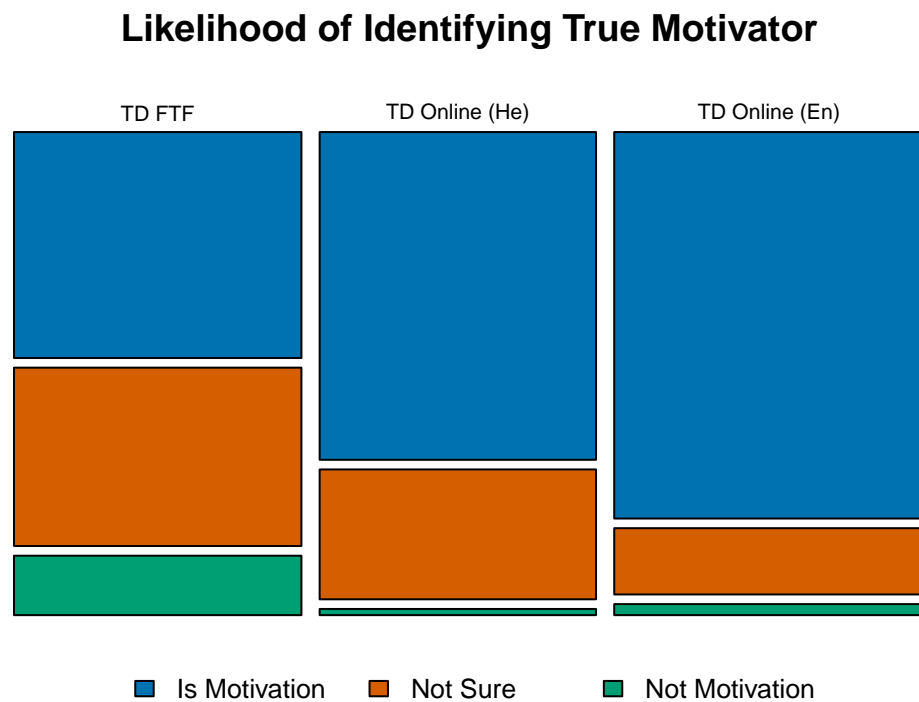
Figure 2

The mosaic plot illustrates participants' responses to the question: "Does the core threat you identified reflect your true motivation?" Tile sizes represent the relative frequencies of responses across groups. The plot indicates that core threats generally align with participants' true motivations. Sensitivity analyses confirmed that these proportions remained consistent regardless of whether core threats matched proximal threats.

548   A permutation test revealed that the median expected number of agreements was 4

549 (30.77%). In practice, 7 (53.8%, $p = .075$) pairs of core threats agreed with one another.

550 While this result is not statistically significant, it suggests that core threats may motivate

551 multiple proximal threats within the same individual. Due to the small sample size, these

552 findings should be interpreted cautiously. Further research is warranted, as this estimate

553 might be higher if more similar compulsions were selected.

554   Interestingly, some pairs might share common underlying threats, even when their

555 coded values did not match. For example, one woman was afraid of contamination and dying

556 if she did not perform her cleaning compulsions (Survival) and also feared breaking up with

557 her boyfriend, not having children, and being alone forever (Affiliation). A deeper

558 investigation might reveal that not having children held the same significance as not

559 surviving for her. This dataset, collected during the initial development of the CTSI, may

560 have been affected by suboptimal administration. Nonetheless, this finding underscores that

561 the same core threats often appear to motivate different proximal threats.

562 **Hypothesis 3: Test-Retest Validity**

563   In the high-anxiety face-to-face sample, 33 individuals (78.6%) completed both

564 evaluations of their core threats. A permutation test revealed that the median expected

565 number of agreements was 11 cases (33.3%). In practice, 17 pairs of core threats agreed with

566 each other (51.5%, $p = .011$).

567   This finding suggests significant test-retest validity, indicating that the same core

568 threats likely motivate fear over time. Furthermore, it supports the notion that different

569 evaluators can reliably identify the same core threat when interviewing an individual.

570 However, the agreement rate is slightly lower than expected. Future research should

571 investigate whether core threats are less stable than predicted or if adjustments to CTSI

572 administration can improve test-retest reliability.

Discussion

[573]

[574] The current study aimed to provide clinical guidelines for identifying core threats in [575] anxiety disorders and to explore the phenomenology of these threats. Core threats, the [576] underlying fears driving proximal threats, play a crucial role in the structure and treatment [577] of anxiety disorders (Zlotnick & Huppert, 2025). While proximal threats may involve [578] immediate fears such as contamination or injury, core threats often reflect deeper concerns, [579] including death, social rejection, or moral failure. Despite their frequent application in [580] clinical practice (commonly referred to as core fears), core threats have not been [581] systematically studied.

[582] Our first hypothesis addressed the discrepancy between core and proximal threats. [583] Previous research (Gillihan et al., 2012; Huppert & Zlotnick, 2012; Murray, Treanor, et al., [584] 2016) has underscored the complexity of core threats and highlighted the importance of [585] clinicians delving deeper into patients' fears. Consistent with these findings, we observed [586] that proximal threats were generally distinct from their associated core threats. Notably, [587] only about one-third of proximal threats in the transdiagnostic samples predicted their [588] corresponding core threats. This suggests that identifying core threats remains a meaningful [589] endeavor, to ensure reliable identification of core threats in the remaining two-thirds. This [590] distinction appears especially critical in OCD, where core threats are more diverse and [591] proximal threats less predictive.

[592] Contrary to our expectations, significant differences in the diversity of core versus [593] proximal threats were observed only in the OCD sample (after applying the Holm-Bonferroni [594] correction), and these effects were modest. Shifting focus to the content of core threats, we [595] observed that, across all four samples, core threats tended to concentrate on themes such as [596] affiliation, self-image, competence, and control. In contrast, proximal threats were often [597] more ambiguous or focused on distress tolerance.

Assessing Validity

The development of the CTSI was driven by practical research and clinical needs. Despite their theoretical foundation and frequent use in clinical practice, core threats lacked a validated tool for systematic measurement in research or therapy. The CTSI was created by integrating common clinical practices with insights from the catastrophizing interview (Davey, 2006). Early versions of the interview were manualized and refined based on expert feedback.

The current study aimed to evaluate the CTSI's validity and reliability as a tool for identifying core threats. Face validity was established through expert clinician reviews, confirming that identified core threats aligned with those commonly observed in psychotherapy. Construct validity was demonstrated through evidence of both convergent and divergent validity. Participants consistently reported that their identified core threats reflected their motivations, demonstrating convergent validity. Meanwhile, the mild associations between core and proximal threats supported divergent validity. Furthermore, participants indicated that core threats captured their motivations better than proximal threats, highlighting their distinctiveness.

In terms of reliability, the CTSI demonstrated robust test-retest reliability, ensuring consistent identification of core threats across administrations. It also exhibited good inter-rater reliability, with different clinicians reaching consistent conclusions. Finally, the findings showed consistency across diverse samples, reinforcing the CTSI's applicability and relevance to various populations.

What are We Measuring?

A major question remains whether fear is indeed organized around core threats to a certain extent. This challenge has two key dimensions: theoretical and functional.

The theoretical challenge involves determining whether core threats are genuinely

623 part of the fear structure and understanding the process by which the CTSI identifies them.

624 It is uncertain whether individuals possess direct verbal access to their underlying

625 motivations. Even if they do, questions arise about how clinicians or researchers can reliably

626 identify these motivations. From this perspective, core threats could be difficult to access or

627 may not exist in the way we conceptualize them. For instance, core threats might be

628 generated through random processes or influenced by non-anxiety-related factors (e.g.,

629 reporting what would sound valuable or important rather than the true motivation).

630 Alternatively, the observed reliability over time and across interviewers could reflect

631 participants recalling previous responses rather than genuine consistency.

632   We have reviewed the theoretical arguments for the existence of core threats

633 elsewhere (Zlotnick & Huppert, 2025). Briefly, we propose that core threats exist in all

634 individuals, and that the evaluations of their probability and of their meaning potentially

635 contribute to pathological anxiety. While not all individuals possess pathological core

636 threats, identifying such threats in those who do can support case conceptualization and

637 enhance the generalization of learning in psychotherapy.

638   Even assuming that a core threat can be determined, an interesting question arises:

639 Is the core threat identified or construed? Is the process of determining a core threat akin to

640 uncovering an existing prototype (cf. Rosch & Lloyd, 1978)? Or should core threats be

641 treated as ad-hoc narratives, individually tailored to activate the fear structure (cf. Barsalou,

642 2003)? If the latter is the case, the therapist's role would be to help the patient construe a

643 core threat that effectively activates the fear network as opposed to determining it.

644   Ultimately, these challenges may be unresolvable. There will always be alternative

645 explanations, as we lack direct access to these theoretical constructs (see De Houwer, 2011).

646 One might ask, "If we can't be sure we can access core threats, are they scientific?" We

647 argue that many useful and theoretically interesting constructs are similarly inaccessible, yet

648 remain valuable, such as attachment styles, cognitive schemas, or implicit biases. Indirect

649 methods, such as physiological measures of anxiety and implicit measures (Gawronski & De

650 Houwer, 2014), may provide access. The accumulating data, particularly the functional

651 implications of core threats, increasingly support the validity of this cognitive construct.

652   The functional challenge is as follows: Are we indeed identifying the true core

653 threats? How can one validate this abstract clinical construct? One approach is to define a

654 functional definition of core threats that *can* be empirically examined (De Houwer, 2011).

655 Core threats primarily represent an individual's motivations to avoid certain stimuli or

656 situations. Indeed, preliminary findings suggested this is accurate; many individuals reported

657 that their identified core threat indeed reflected their true motivation. However, a more

658 concrete functional definition is needed.

659   Furthermore, a significant critique of the CTSI is its potential circularity. By defining

660 proximal threats as distinct from core threats, participants are implicitly guided to identify a

661 different underlying threat. Consequently, it is unsurprising that proximal threats differ from

662 core threats. This issue is especially pronounced in cases involving distress-tolerance-related

663 core threats, which are rare among core threats but common among proximal threats.

664 Additionally, requiring participants to articulate potential harm—even when they initially

665 report none—may inadvertently prompt them to identify an alternative core threat.

666   The solution for both of these problems would lie in demonstrating that core threats,

667 as identified through the CTSI, exhibit distinct behavioral patterns compared to proximal

668 threats. Core threats are believed to be more effective targets for safety learning, such as

669 through exposure or behavioral experiments (Zlotnick & Huppert, 2025). Thus,

670 demonstrating that focusing on core threats improves therapeutic outcomes would provide

671 strong evidence for their validity.

Distress Tolerance

In the face-to-face samples, particularly in Experiment 1, distress tolerance frequently emerged as a proximal threat but was rare as a core threat. This suggests that distress tolerance may serve as a form of avoidance rather than an ultimate feared outcome. Distress tolerance is often expressed in broad, universally valid terms (e.g., "I can't handle this discomfort"), which can enable individuals to avoid confronting the specific, more threatening fears underlying their distress. In essence, focusing on distress tolerance can provide an avenue for avoidance by shifting attention away from addressing the actual threat. Interestingly, this pattern was not observed in the self-administered versions of the CTSI, possibly because the detailed prompts in the self-administered format encouraged participants to identify harm-avoidant threats explicitly.

Recent literature emphasizes distress tolerance as a central mechanism in anxiety disorders (Barlow et al., 2010; S. C. Hayes et al., 2006; Keough et al., 2010). Literature on OCD highlights the importance of "not just right" experiences, sensory phenomena, incompleteness, and other seemingly harmless phenomena (Ecker & Gönner, 2008; e.g., Ferrão et al., 2012). An association between these phenomena and other anxiety disorders has also been found (Michel et al., 2016). Indeed, distress tolerance has been shown to correlate with psychopathology (Leyro et al., 2010) and has been suggested as a treatment target in various contexts, such as smoking cessation (Brown, 2022) and borderline personality disorder (Linehan, 1993).

Distress tolerance has been proposed as a primary transdiagnostic process to target in emotional disorders (Barlow et al., 2010). Building on this model, we emphasize harm avoidance as a complementary mechanism that warrants equal consideration. The prevalence of distress tolerance related proximal threats, and rarity of distress tolerance related core threats suggests that, even when distress tolerance is evident, harm avoidance likely plays a significant role in anxiety. Recent findings further support this notion, indicating that at

least part of the motivation underlying NJRE in OCD arises from interference with cognitive processes rather than the enjoyment of daily life (Melli et al., 2020). In other words, beyond the challenge of tolerating distress, there remains the critical task of disconfirming underlying threats that sustain anxiety (Craske et al., 2022).

When designing transdiagnostic interventions, it is essential to address multiple underlying processes (Hofmann & Hayes, 2019). While distress tolerance has received considerable attention, we argue that harm avoidance—particularly in the context of core threats—should also be considered a critical addition (A. T. Beck & Dozois, 2011; Foa & Kozak, 1986; Steimer, 2002).

Affiliation Core Threats

Affiliation consistently appeared as a prominent value in the transdiagnostic experiments. This could reflect an over representation of socially anxious individuals in the sample, or it may indicate that the affiliation category encompasses diverse subtypes. Differentiating between these subtypes in future research may provide greater specificity. Alternatively, affiliation may genuinely represent the most common core threat, as suggested by theories emphasizing its evolutionary and psychological significance (Bowlby, 1969; cf. Gilbert, 2001).

Core Threats in OCD

Much of the foundational work on core threats originates in the OCD literature (Gillihan et al., 2012; Huppert & Zlotnick, 2012). It is therefore reasonable to hypothesize that core threats hold particular significance for individuals with OCD. Our findings support this hypothesis and reveal notable differences between the OCD sample and the transdiagnostic samples. In the OCD sample, proximal threats did not predict core threats at all, a pattern not observed in the transdiagnostic groups. Additionally, core threats in the OCD sample were significantly more diverse than proximal threats, underscoring their heterogeneity. There was also a disproportionate prevalence of distress tolerance-related

proximal threats in the OCD sample, but this pattern did not extend to core threats. These results emphasize the critical importance of identifying and addressing core threats for individuals suffering from OCD.

The observed differences between the OCD and transdiagnostic samples may stem from the inherent diversity of OCD presentations, which manifest in various forms. Alternatively, this distinction may reflect the fact that the OCD sample was the only validated pathological group in our study. Future research should investigate these differences further, focusing on how core and proximal threats interact across different anxiety disorders and how these relationships may inform tailored intervention strategies.

Limitations and Further Research

Core threats have been theorized to play a central role in the generalization of threat (see Zlotnick & Huppert, 2025). If this is indeed the case, we would expect the same core threats to motivate multiple different proximal threats. In the current study, we found some non-significant initial evidence that one core threat can underlie multiple proximal threats. If this finding is confirmed with further research, it would suggest that safety learning targeting core threats could be a more effective intervention for anxiety disorders. This notion would be strengthened further by demonstrating better generalization for core threat-focused learning (Murray, Treanor, et al., 2016; see Pinciotti et al., 2021). However, the current dataset is too small to reach definitive conclusions, and further study with a larger sample size is needed.

To investigate the agreement between threats, we needed to codify them. As no existing typology fully suited our needs, we developed one specifically for this study. While this typology has not yet been validated, and there is a possibility of over-dividing certain categories (e.g., safety and physical discomfort) or under-dividing others (e.g., affiliation), we believe it is sufficient for exploring the associations between different threats. Nonetheless, further psychometric work is needed to establish a robust and validated typology for core

750 threats.

751   The CTSI attempts to identify the ultimate underlying threat, but it is not clear if it

752 succeeds. The stopping criteria used in the CTSI are accepted in the field (see Davey, 2006).

753 However, there is no guarantee that the true motivation is identified. For example, should

754 one stop at "I will die," or ask further to discover that the fear is of burning in hell? And is

755 burning in hell the correct stopping point, or should one delve deeper? The instructions in

756 the CTSI are to stop once the patient can no longer find any deeper meaning, repeat

757 themselves, or once they start getting further from the underlying threat, as evidenced by

758 lower levels of distress. Ultimately, this question remains open and subjective to the

759 discretion of the interviewer. We argue that, despite the inherent noise in the process, the

760 answers obtained are at least better than plain proximal threats, even if they do not reach

761 the "true" core threat.

762   We know from several studies that core threats are deceptively diverse (Zlotnick &

763 Huppert, 2025). For instance, Greenberg and colleagues (2018) examined whether the

764 underlying fear in olfactory reference syndrome centers on embarrassing oneself or offending

765 others. They found that individuals possess both types of motivations, regardless of their

766 cultural background (Western vs. Eastern). Moreover, about a quarter of participants

767 reported a completely unexpected concern: whether the odor indicated a medical condition.

768 This highlights the importance of investigating idiosyncratic fears expressed by individuals,

769 beyond the stereotypical fears associated with specific disorders. However, we hypothesize

770 that different disorders exhibit distinct patterns of core threats. For example, safety is a

771 prominent concern in panic disorder and OCD but appears less central in social anxiety

772 disorder, where competence and affiliation often take precedence. Similarly, morality plays a

773 significant role in OCD but is less pronounced in other disorders. Thus, variability in core

774 threats reflects both systematic, disorder-specific tendencies and individual idiosyncrasies.

775 Future research should focus on mapping these associations more comprehensively.

An additional limitation of this study is the low prevalence of predictability core threats. Our clinical experience indicates that such core threats should be more prevalent (though not quite as prevalent as other motivators). It is likely that the focus of the CTSI on specific harm-avoidance-type outcomes may have masked such core threats. For example, some people who fear having cancer are particularly bothered by the inherent fuzziness of the situation - that they can never know for sure. When asked what they fear, they would focus on cancer, but that is in fact over-shooting the actual motivating core threat. To address this problem we recommend that interviewers review the downward arrow and explicitly ask what the worst outcome would be.

Implications for Clinical Practice and Future Research

The findings of this study have implications for both clinical practice and future research. Clinically, the Core Threat Structured Interview (CTSI) proves to be a valuable tool in uncovering the underlying fears that drive anxiety disorders, facilitating the development of more effective, tailored treatment plans. This aligns with the work of Persons (2012), who emphasized the importance of individualized case formulations in cognitive-behavioral therapy.

For future research, these findings open new avenues for exploring the mechanisms underlying the stability of core threats and their impact on treatment outcomes. The fact that the CTSI includes a self-administered, online version that appears to be reliable and valid should allow significant further research. We contend that one major limiting factor of studying core threats to date has been the absence of such a tool. Investigating the interaction between core threats and other psychological constructs, such as resilience and coping strategies, could further enhance our understanding of anxiety disorders and inform more comprehensive treatment approaches.

In conclusion, this study underscores the potential critical role of core threats in anxiety disorders and provides a valid and reliable structured approach to identifying and

addressing these threats in clinical practice. By focusing on the underlying fears that drive surface threats, clinicians might be able to develop more effective interventions, ultimately improving patient outcomes.

Author Contributions

Conceptualization: E. Zlotnick, J.D. Huppert; Methodology: E. Zlotnick; Formal Analysis: E. Zlotnick; Writing - Original Draft Preparation: E. Zlotnick; Writing - Review & Editing: E. Zlotnick, J.D. Huppert; Supervision: J.D. Huppert.

Conflicts of Interest

The authors declare that there were no conflicts of interest with respect to the authorship or the publication of this article.

Acknowledgments

Funding

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