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A functional interview for investigating behavioral contingencies relevant to Social Anxiety Disorder

Uma entrevista funcional para investigação clínica de contingências comportamentais relevantes no Transtorno de Ansiedade Social

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Abstract

Objective
This study aims to propose a Functional Interview designed to investigate behavioral contingencies that characterize patterns of socially anxious behavior related to Social Anxiety Disorder.

Method
The Functional Interview for Social Anxiety is a semi-structured interview designed to identify behavioral episodes characteristic of socially anxious behavior.

Results
It consists of 18 questions distributed across seven sections, intended to comprehensively identify all behavioral elements (antecedents, responses, and consequences) that correspond to the five proposed functional criteria (behavioral contingencies) associated with socially anxious behavior. The Functional Interview for Social Anxiety can assist both psychologists and psychiatrists in recognizing patterns of socially anxious behavior through the investigation of information relevant to these functional criteria.

Conclusion
It is an instrument that makes the functional investigation of socially anxious behavior feasible in clinical contexts, aiding in the understanding of this behavioral phenomenon using a functional model of behavior.

Keywords: Behavior and behavior mechanisms; Psychological interview; Social anxiety disorder; Social behavior.

Resumo

Objetivo
Este trabalho tem como objetivo propor uma Entrevista Funcional delineada para investigar as contingências comportamentais que caracterizam os padrões do comportamento socialmente ansioso relativas ao Transtorno de Ansiedade Social.

Método

A Entrevista Funcional para Ansiedade Social é uma entrevista semiestruturada concebida para identificar os episódios comportamentais característicos do comportamento socialmente ansioso.

Resultados

Consiste em 18 perguntas distribuídas em 7 seções, destinadas a identificar de maneira abrangente todos os elementos comportamentais (antecedentes, respostas e consequentes) que compõem os cinco critérios funcionais propostos (contingências comportamentais) associados ao comportamento socialmente ansioso.

Conclusão

A Entrevista Funcional para Ansiedade Social pode auxiliar tanto psicólogos quanto psiquiatras no reconhecimento dos padrões do comportamento socialmente ansioso mediante a investigação de informações relevantes para os critérios funcionais. Trata-se de um instrumento que torna exequível a investigação funcional do comportamento socialmente ansioso em contextos clínicos, possibilitando a compreensão desse fenômeno comportamental usando um modelo funcional do comportamento.

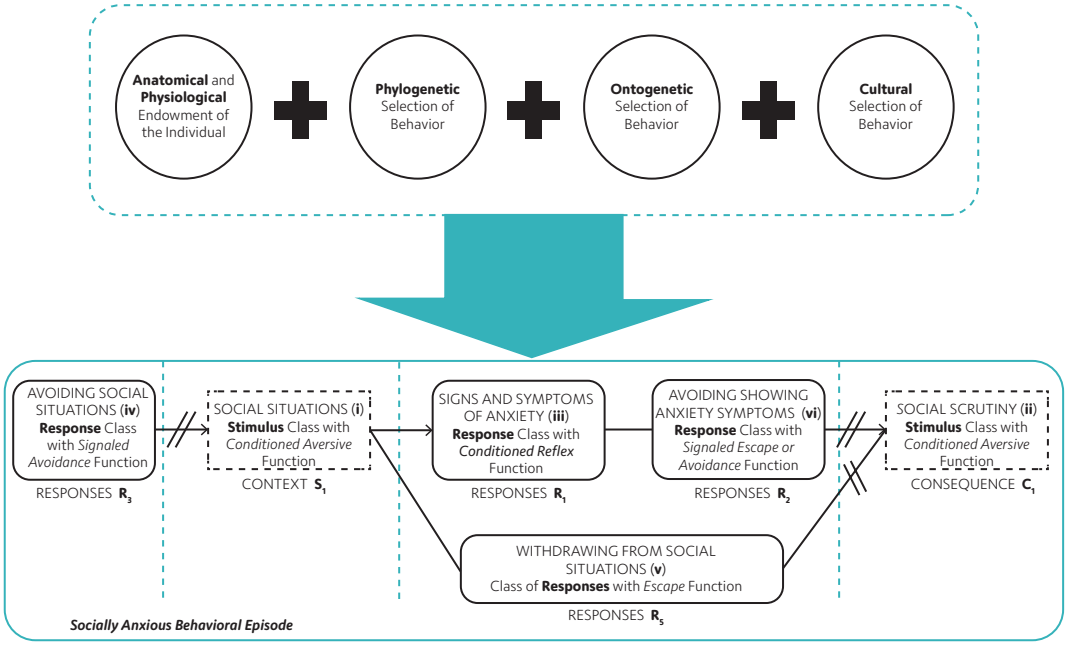
Palavras-chave: *Comportamento e mecanismos comportamentais; Entrevista psicológica; Transtorno de ansiedade social; Comportamento social.*

Social Anxiety Disorder (SAD) is described by the DSM-5 as a clinical condition in which an individual fears, feels anxious, and avoids being scrutinized in social interactions (American Psychiatric Association [APA], 2022). It is a chronic, prevalent condition that causes distress and impairment to the individual (Baptista et al., 2012; Stein et al., 2017; Vilaplana-Pérez et al., 2020).

A previous investigation (Iêgo & Ribeiro, 2024) identified distinctive behavioral patterns associated with socially anxious behavior, proposing an analytical-behavioral characterization that views SAD as a complex phenomenon marked by specific patterns of behavior in social contexts. The functional classes of behavior present in these behavioral patterns include two stimulus classes, three operant response classes, and one conditioned reflex response class (Figure 1).

Figure 1

Behavioral analytic model of socially anxious behavior



Source: Adapted Iêgo and Ribeiro (2024).

This analytical-behavioral model (Iêgo & Ribeiro, 2024) interprets socially anxious behavior as one possible variation of human behavior, which is determined by multiple factors. These include both the biological aspects of an individual and the behavioral selections that occur within the biopsychosocial realms (phylogenetic, ontogenetic, and cultural) through behavioral processes common to so-called 'normal' behavior (Simon & Hessen, 2019). Therefore, the behavioral phenomenon known as SAD can be represented as a functional profile of a biologically unique individual, shaped by their history of interactions and adapted to the environmental contexts in which they have been or are situated.

To this end, the processes and behavioral mechanisms that characterize socially anxious behavior must be investigated, identified, and described. While works such as those by Schlund et al. (2021) have helped shed light on some of these mechanisms, the current scientific knowledge has not yet achieved a sufficiently comprehensive understanding that would allow mental health professionals to personalize treatment specific to a given individual's condition.

Clinical assessment is also related to the quality of intervention. Reviews on the subject (to which interested readers are referred), such as that by Wong et al. (2016), dedicated to instruments for the evaluation of SAD, or that by DeSousa et al. (2013), which reviewed the instruments available in Brazil for the evaluation of anxiety symptoms and disorders, reiterate the importance of a proficient evaluation for effective treatment and sound prognosis.

A literature review conducted by the authors identified no clinical instruments that align with an analytical-behavioral interpretation of SAD, notably none that endeavor to examine socially anxious behaviors within a framework of reinforcement contingencies. The standardized instruments available and usually adopted in clinical evaluation for diagnosis, severity assessment, and measurement of clinical improvement (Ramos & Cerqueira-Santos, 2021) primarily use estimates of the intensity of perceived fear/anxiety in social situations as the main measure. These instruments are also characterized by the use of questionnaires, with information collected through self-reporting and measurements graded on a Likert scale.

While both overt and covert emotional manifestations of anxiety in social situations are mostly composed of conditioned reflex responses (Abend et al., 2020), these are only a part of the broader behavioral phenomenon termed social anxiety, as previously discussed (Iêgo & Ribeiro, 2024). The authors argue that an analytical-behavioral understanding of SAD must consider the evaluation of operant responses as the fundamental and most relevant aspect of an investigation focused on socially anxious behavior. From this perspective, beyond sensations and emotional distress, the pattern of choices an individual makes in social situations can be considered representative and reliable data for characterizing socially anxious behavior and for assessing clinical improvement.

Functional interviews constitute another possible instrument for clinical assessment (Gadaire et al., 2021; Haynes et al., 2019). These are also self-report instruments designed to investigate behavior, its antecedents, and consequences. Through functional interviews, the behavioral therapist aims to identify specific contingencies that control the emission of these behaviors, as well as how modifying the context in which they arise could influence their occurrence.

Structured and semi-structured interviews have mostly been developed for individuals with atypical development or those receiving care at institutions in which they reside or spend a significant part of the day (as pointed out by Anderson & St. Peter, 2013), and also constitute a preliminary step in so-called "experimental functional analysis" (Sturmey, 2020). These characteristics limit use to clinical settings involving patients with typical development (Anderson & St. Peter, 2013), especially for verbally capable adults seen on an outpatient basis.

While there are functional instruments that do not assess SAD or are not appropriate for use with verbally capable adults, there are no functional instruments (in the analytical behavioral sense) aimed at investigating SAD. It is therefore considered necessary to develop an instrument appropriate for adults suspected of having SAD.

In our previous work (Iêgo & Ribeiro, 2024), an analytical-behavioral model for interpreting SAD was constructed through the functional operationalization of DSM-5 diagnostic criteria (APA, 2022). The operational analysis of these diagnostic criteria resulted in the identification of five behavioral contingencies that characterize socially anxious behavior. These behavioral contingencies guided the development of five functional criteria presented as a proposed behavioral model for the diagnosis and assessment of SAD. Table 1 summarizes the functional criteria previously proposed to assess socially anxious behavior (Iêgo & Ribeiro, 2024).

The proposed analytical-behavioral model inspired the development of an instrument to functionally assess behavior that allows the identification of the behavioral contingencies described in the functional criteria. This instrument aims to not only address the gap observed in the literature, but also to evaluate the validity of these functional criteria, thereby ensuring correspondence between these criteria and the diagnosis of SAD.

Table 1

Functional criteria for identifying and assessing socially anxious behavior

Functional Criterion	Defining Characteristic of the Criterion	Contingency Criterion		
		Antecedent Term	Response Term	Consequence Term
CF1	Two-Term Contingency with the Response of *Experiencing* Fear/Anxiety in Social Interactions	S_1 Conditioned Aversive Stimulus: 'social situations'	R_1 Both overt and covert conditioned reflex responses of 'fear and anxiety'	
CF2	Three-Term Contingency with the Response of *Avoiding* Showing symptoms *in Social* Interactions	S_1 Stimulus: '*social situations*', which function as pre-aversive stimuli	R_2 Both overt and covert operant responses of "avoiding showing anxiety symptoms," which function as an escape/avoidance response	C_{1x} Prevention of the presentation of aversive stimulus: "possibility of negative evaluation by others"
CF3	Three-Term Contingency with the Response of *Avoiding (avoidable) Social Situations*	S_2 Any warning stimulus that signals the presentation of the stimulus "*avoidable social situations*"	R_3 Both overt and covert operant responses of "avoiding the social situation," which function as avoidance responses	S_{1x} Postponement or deletion of the presentation of the aversive stimulus 'social situation'* C_{1x} Prevention of the presentation of aversive stimulus: "possibility of negative evaluation by others" C_2 Event involving the presentation/termination of stimuli that comprise the aversive condition 'functional impairments'**
CF4	Three-Term Contingency with the Response of *Enduring Social Situations*	S_1 The stimulus ***"social situations,"*** which function both as conditioned aversive stimuli and pre-aversive stimuli	R_1 Both overt and covert conditioned reflex responses of fear and anxiety R_2 Both overt and covert operant responses of avoiding showing symptoms of anxiety, which function as an escape/avoidance response R_4 Both overt and covert operant responses related to enduring the social situation, which function as an avoidance response	C_{2x} Postponement or deletion of the potential event 'functional impairments'** C_1 Possibility of presentation the event 'negative evaluations by others', which functions as an aversive stimulus
CF5	Three-Term Contingency with the Response of *Escaping Social Situations*	S_1 Conditioned aversive stimulus "*social situations*"	R_5 Both overt and covert operant responses with the function of escaping the social situation	S_{1x} Termination of the aversive stimulus 'social situation'* C_{1x} Termination of the possibility of the presentation of the aversive stimulus 'negative evaluation by others' C_2 Possibility of functional impairments, which functions as an aversive stimulus**

Note: *Immediate consequence; **Delayed consequence.

The adoption of reliable functional criteria and a suitable functional instrument could aid not only behavioral analysts, but also professionals from other fields in identifying relevant contingencies in the process of diagnosing SAD, assessing disorder severity, and directing clinical efforts toward relevant behavior patterns for improvement. A functional interview could represent a promising resource as an instrument that allows the identification of these contingencies in both clinical and research settings. Additionally, it is an essential stage in our line of research aimed at constructing scientific and evidence-based models for identifying, evaluating, and intervening in psychological conditions such as SAD.

The objective of this study is to present the development of an instrument (the Functional Interview for Social Anxiety [FISA]) designed to investigate the five proposed behavioral contingencies that distinguish socially anxious behavior, which aim to achieve a diagnosis of Social Anxiety Disorder.

Method

The functional interview aims to identify behavioral contingencies characteristic of socially anxious behavioral episodes and their relationship to the DSM-5 diagnostic criteria for SAD (APA, 2022). These behavioral contingencies are present in the five functional criteria for recognizing SAD (Iêgo & Ribeiro, 2024) and are described in Table 1.

To standardize the nomenclature of the technical terms used in this work, it was considered that: (a) a *behavioral episode* is the functional unit of behavior (Matos, 1999), that is, the smallest fragment of organism-environment interaction necessary for understanding the function of behavior in a given interaction. It may be a triple contingency, a complex contingency, or a contingency with chained responses; (b) a *behavioral contingency* is the structure that presents relationships between the responses that constitute the behavior under analysis and the environmental events that affect it and/or are affected by it. An operant behavioral contingency corresponds to "the conditions under which a consequence is produced by a response, that is, the occurrence of the consequence depends on the occurrence of the response" (Catania, 2013, p. 434). A respondent contingency "refers to the conditions under which some stimuli are followed by others" (Catania, 2013, p. 435); (c) the *contingency terms* of analysis are categories that group, distinguish, and delimit events that temporally participate in a behavioral episode. The term *antecedent* groups events occurring prior to the emission of responses. These will be grouped under the term response. The events produced by the responses are grouped under the term consequence. Chained contingencies can contain more than three terms; (d) *behavioral components* (or elements) are broad functional classes of either stimuli or responses that may constitute different contingency terms. Each behavioral component is labeled with an uppercase letter and a subscript numeral (e.g. S_1). The elements present in the term antecedent are represented by the letter S, while those in the term response are labeled with the letter R, and those in the term consequence with the letter C; finally, (e) *behavioral events* correspond to different topographical occurrences classifiable as a behavioral element.

For example, suppose an interviewee reports that he/she usually takes a tranquilizer drug before speaking in public, hides his/her hands and holds them firmly to conceal shaking, speaks in a deep voice and in a paused manner to mask sounding muffled, and wears makeup to hide blushing. In this example, each of these behaviors aimed at preventing others from noticing nervousness are the *behavioral events* that constitute a broad functional response class labeled "avoiding showing symptoms of anxiety in social interactions", which in this case is the *behavioral component* (element)

R_2. Both the behavioral element R_2 (which includes all behaviors described in this example) and the behavioral element R_1 (a class of respondent responses related to fear and anxiety) are part of the *response term* of a three-term operant *behavioral contingency*.

The elements of behavioral contingencies present in the functional criteria for SAD investigated in the interview include: an antecedent element related to social situations involving possible scrutiny by others (S_1); two consequent elements, which are negative social evaluation (C_1) and functional impairments resulting from SAD (C_2); and four elements of social anxiety responses, namely, experiencing fear and/or anxiety in social situations (R_1), avoiding showing fear/anxiety symptoms in social situations (R_2), avoiding social situations (R_3), and escaping from social situations (R_5).

Two behavioral elements present in the functional criteria were not directly investigated in the interview, namely: the antecedent stimulus warning of avoidable social situations (S_2) and the response of temporarily enduring unavoidable social situations (R_4). Since the emission of R_3 (avoiding avoidable social situations) is only possible following the presentation of S_2, the presence of S_2 is indirectly investigated when evaluating R3. Similarly, R_4 (temporarily enduring unavoidable social situations) occurs in SAD concomitantly with response R_2 and is succeeded by response R_5 (escaping from the social situation when escape is possible). Thus, the investigation of R_4 is indirectly carried out when evaluating response R_2.

Each of the behavioral elements is investigated in a specific section of the interview. The order of presentation of the behavioral elements follows the sequence in which each behavioral response is mentioned in the DSM-5. Each investigated response is then followed by the exploration of the consequent events, and then the antecedents. The functional interview also employs terminology identical to that used by the DSM (APA, 2022).

Results

Our investigation into each of the behavioral elements that distinguish socially anxious behavior resulted in a semi-structured interview composed of 18 questions distributed across seven sections. Each section aims to identify each of the elements representative of a socially anxious behavioral episode, namely: one antecedent element, two consequent elements, and four responses.

Section I: This section comprises three questions (#1-3) designed to identify response R_1, which pertains to conditioned reflex responses occurring in social situations. The presence of response R_1 is a necessary condition to meet all DSM-5 criteria (A-H). Question #3 was designed to exclude other clinical conditions as a differential diagnosis, addressing DSM Criteria I and J.

Section II: This section comprises three questions (#4-6) designed to identify consequence C_1, which relates to the prevention of the occurrence of aversive social stimuli. These aversive social stimuli include situations implying the potential for negative evaluation by others, humiliation, embarrassment, rejection and/or offense, as described in DSM-5 criterion B.

Section III: This section comprises two questions (#7 and 8) dedicated to identifying consequence C_2, which refers to the outcomes related to distress and impairment in social, academic, occupational, or other important areas of functioning resulting from socially anxious behaviors. Consequence C_2 is described in DSM-5 criterion G and is considered the primary condition for distinguishing between behaviors consistent with SAD and other social avoidant behaviors deemed culturally acceptable.

Section IV: Consisting of one question (#9), this section is dedicated to identifying antecedent S_1 (social situations that elicit fear and anxiety responses). The examples presented in question #1 of Section I can also be revisited. The concomitant presence of antecedent S_1 and response R_1 ensures compliance with DSM-5 criteria A and C.

Section V: This section consists of four questions (#10-13) aimed at identifying response R_3 (avoidance of social situations). This involves signaled avoidance preceded by a warning stimulus (S_2) emitted precisely to prevent the occurrence of S_1 (social situations). Questions #11-13 allow for examining characteristics of social avoidance behavioral patterns (rate, conditions, etc.), thus providing parameters for determining the severity of Social Anxiety Disorder. The presence of response R_3 ensures compliance with DSM-5 criterion D.

Section VI: Consisting of three questions (#14-16), this section is aimed at identifying response R5 (escape from social situations), encompassing both overt and covert behaviors emitted to avoid enduring social situations. In order to understand aspects related to motivation and distress tolerance, question #16 was included to investigate the presence of an alternative response to R_5, i.e., deliberately enduring a social situation. The presence of response R5 ensures compliance with DSM-5 criterion D.

Section VII: Consisting of two sets of questions (#17-18), this section was designed to identify response R_2 (responses of Escape or Avoidance to avoid showing symptoms of anxiety) when an individual finds himself/herself in social situations. The presence of response R_2 ensures compliance with DSM-5 criterion B.

Table 2 presents the organization of the FISA sections and summarizes the information detailed above.

Table 2

Functional Interview for Social Anxiety section structure and relationships with the proposed Functional Criteria and DSM-5 Diagnostic Criteria

1 of 2

FISA Section	Objective of the Section	FISA Questions	Element of the Contingency Criterion Investigated	Functional Criterion Investigated	DSM-5 Criterion
I	Identification of **R_1** Conditioned Reflex Responses in Social Situations	#1 #2 #3	**R_1** (Both overt and covert Public and private responses of Fear/ Anxiety in social situations)	CF1. Contingency with the Response of *Experiencing* Fear/Anxiety in Social Interactions	A. E. F. I. J.
II	Identification of **C_1** Aversive Social Consequences.	#4 #5 #6	**C_1** (Environmental factors that represent the consequence of potential negative evaluation by others in social situations)	CF2. Contingency with the Response of Avoiding Showing Symptoms of Anxiety in Social Interactions CF3. Contingency with the Response of Avoiding Avoidable Social Situations[1] CF4. Contingency with the Response of Enduring Social Situations. CF5. Contingency with the Response of Escaping from Social Situations[1]	B.
III	Identification of **C_2** Consequences Related to Impairments and Distress	#7 #8	**C_2** (Events related to potential losses or impairments in social, professional, or other areas of life resulting from socially anxious behavior)	CF3. Contingency with the Response of Avoiding Avoidable Social Situations[1] CF4. Contingency with the Response of Enduring Social Situations[2] CF5. Contingency with the Response of Escaping from Social Situations[1]	G.
IV	Identification of **S_1** Social Situations that Elicit Fear and Anxiety Responses	#9	**S_1** (Social situations implying the possibility of evaluation by others)	CF1. Contingency with the Response of *Experiencing* Fear/Anxiety in Social Interactions. CF2. Contingency with the Response of Avoiding Showing Symptoms of Anxiety in Social Interactions CF3. Contingency with the Response of Avoiding Avoidable Social Situations	A. C.

Table 2

Functional Interview for Social Anxiety section structure and relationships with the proposed Functional Criteria and DSM-5 Diagnostic Criteria

2 of 2

FISA Section	Objective of the Section	FISA Questions	Element of the Contingency Criterion Investigated	Functional Criterion Investigated	DSM-5 Criterion
				CF4. Contingency with the Response of Enduring Social Situations. CF5. Contingency with the Response of Escaping from Social Situations	A. C.
V	Identification of **R_3** Avoidance Responses to Social Situations in the Presence of a Warning Stimulus [S_2]	#10 #11 #12 #13	**R_3** (Avoidance response to avoidable social situations)	CF3. Contingency with the Response of *Avoiding* Avoidable Social Situations	D.
VI	Identification of **R_5** Escape Responses in Social Situations	#14 #15 #16	**R_5** (Escape Responses in Social Situations)	CF5. Contingency with the Response of ***Escaping*** from Social Situations	D.
VII	Identification of **R_2** Escape or Avoidance Responses to Avoid Showing Symptoms of Anxiety	#17 #18	**R_2** (Response of avoiding showing symptoms of anxiety)	CF2. Contingency with the Response of Avoiding Showing Symptoms of Anxiety in Social Interactions	B.

Note: [1]Present as C_{1x}; [2]Present as C_{2x}; FISA: Functional Interview for Social Anxiety; SAD: Social Anxiety Disorder.

The identification and characterization of socially anxious behavior patterns are conducted by aligning the information collected in the FISA with previously proposed functional criteria (Iêgo & Ribeiro, 2024). To achieve this, it is necessary to analyze the behavioral elements identified by the FISA and evaluate correspondence between these elements and those required for each functional criterion.

The behavioral elements required to satisfy Functional Criterion 1 are investigated in sections I and IV of the FISA. Functional Criterion 2 is investigated in sections II, IV and VII; Functional Criterion 3 in sections II to V; Functional Criterion 4 in sections I to IV, VI and VII; Functional Criterion 5 in sections II, III, IV and VI. Relationships between the FISA questions and the functional criteria they correspond to are summarized in Table 3. The behavioral patterns observed through the FISA can only be characterized as socially anxious behavior patterns if all five functional criteria are simultaneously met.

Table 3

Correspondence between Functional Interview for Social Anxiety Questions and Functional Criteria: Scoring Sheet

1 of 2

functional criteria *contingency with a response of:*	Behavioral Episode (Contingency Criterion)		
	Contextual situation	Socially anxious behaviors	Results produced by behavior
CF1. *Experiencing Fear*/Anxiety in Social Interactions	Antecedent S_1 Situations described in Question #9 (Section IV)	Response R_1 Behaviors described in *Question* #2 (Section I)	- - - - - - - -
CF2. Avoiding Showing Symptoms of Anxiety in Social Interactions	Antecedent S_1 Situations described in ***Question*** #9 (Section IV)	Response R_2 Behaviors described in *Question* #17 (Section VII)	Consequence S_1 Events prevented as described in *Question* #4 (Section II)
CF3. Avoiding Avoidable Social Situations	Antecedent S_2 Questions #11 and #13 (Section V)	Response R_3 Behaviors described in *Question* #10 (Section V)	Consequence S_{1x} Events prevented as described in *Question* #9 (Section IV) Consequence C_{1x} Events prevented as described in ***Question*** #4 (Section II) Consequence C_2 Impairments described in *Question* #8 (Section IV)

Table 3

Correspondence between Functional Interview for Social Anxiety Questions and Functional Criteria: Scoring Sheet

functional criteria *contingency with a response of:*	Behavioral Episode (Contingency Criterion)		
	Contextual situation	Socially anxious behaviors	Results produced by behavior
CF4. Enduring Social Situations	Antecedent S_1 Situations described in ***Question*** #9 (Section IV)	Response R_4 Behaviors described in *Questions* #14$_{PAX}$ and 16 (Section VI) Response R_1 Behaviors described in *Question* #2 (Section I) Response R_2 Behaviors described in *Question* #17 (Section VII)	Consequence C_{1x} Events prevented as described in ***Question*** #4 (Section II) Consequence C_{2x} Prevention of Impairments described in *Question* #8 (Section III)
CF5. Escaping Social Situations	Antecedent S_1 Situations described in ***Question*** #9 (Section IV)	Response R_5 Behaviors described in *Questions* #14 and 15 (Section VI)	Consequence S_{1x} Events prevented as described in ***Question*** #9 (Section IV) Consequence C_{1x} Events prevented as described in ***Question*** #4 (Section II) Consequence C_2 Impairments described in *Question* #8 (Section IV)

Although the primary objective of the FISA is to investigate the data necessary for identifying socially anxious behavior according to previously proposed functional criteria (Iêgo & Ribeiro, 2024), it also investigates relevant information that can be used for diagnosing SAD according to DSM-5 criteria. For each DSM-5 diagnostic criterion, there are corresponding questions in the FISA (Table 4). The DSM-5 criteria A, C, E, F, I, and J are investigated in sections I and III; criterion B is investigated in sections II and VII; and criterion D in sections IV to VI.

Table 4

Correspondence between Functional Interview for Social Anxiety questions and DSM-5 diagnostic criteria: scoring sheet

DSM-5 Criterion for SAD	FISA Section						
	Section I	Section II	Section III	Section IV	Section V	Section VI	Section VII
Criterion A	#1-2	-	-	#9	-	-	-
Criterion B	-	#4-6	-	-	-	-	#17-18
Criterion C	#2	-	-	#9	-	-	-
Criterion D	-	#4-6	-	#9	#10-13	-	-
Criterion E	#3	-	-	-	-	-	-
Criterion F	#2	-	-	-	-	-	-
Criterion G	-	#4-6	#7-8	-	#10	#14-16	-
Criterion H	#3	-	-	-	-	-	-
Criterion I	#3	-	-	-	-	-	-
Criterion J	#3	-	-	-	-	-	-

Note: FISA: Functional Interview for Social Anxiety; SAD: Social Anxiety Disorder.

Discussion

This study demonstrates the feasibility of designing a functional assessment instrument to evaluate behavioral phenomena described in diagnostic manuals, such as SAD. To achieve this, it was first necessary to operationalize the diagnostic criteria for SAD into behavioral contingencies to distinguish socially anxious behavior, as performed in a previous work by the present authors (Iêgo &

Ribeiro, 2024). Once the behavioral elements of the contingencies distinguishing the said behavior had been identified, it was then possible to examine these in the context of a clinical interview.

Thus, the FISA materializes this proposal: a semi-structured clinical interview aimed at investigating the behavioral elements typically present in behavioral episodes characteristic of socially anxious behavior. It is an instrument that facilitates the identification of socially anxious patterns through an assessment based on the functional criteria presented in Table 1. The interview was developed from the conception that socially anxious behaviors are part of reinforcement contingencies and, therefore, it is the clinician's responsibility to investigate these contingencies (Iêgo & Ribeiro, 2024). Hence, the FISA serves as a clinical tool aligned with the analytical-behavioral understanding of the phenomenon known as SAD.

Other mental health professionals may also benefit from using the FISA. It was designed to assist not only psychologists but also psychiatrists in recognizing patterns of socially anxious behavior, as it investigates information relevant to the confirmation of DSM-5 diagnostic criteria. It is entirely feasible to collect all necessary information for diagnosing SAD according to the DSM-5 criteria via the questions in the FISA, as shown in Table 4. The FISA instrument is based on an understanding that harmonizes both with the fundamental principles of Behavior Analysis (BA) and with the current neuropsychiatric understanding of SAD.

As a functional assessment instrument, the primary outcome measure of the FISA is the data necessary to satisfy each of the five functional criteria for socially anxious behavior. Table 3 illustrates how responses from the FISA facilitate the identification of the proposed functional criteria for recognizing socially anxious behavior (Iêgo & Ribeiro, 2024). When all five functional criteria are met simultaneously, an individual exhibits a pattern of socially anxious behavior, a condition that phenomenologically corresponds to the DSM-5 diagnosis of SAD.

Both mental health professionals, with a particular emphasis on psychiatrists, and the general public have an interest in differentiating whether a certain behavioral presentation is pathological or not (APA, 2022). While acknowledging the importance of characterization from a diagnostic standpoint, behavior analysts seek to identify functional similarities among behavioral patterns and processes that cause distress to the individual and/or their environment (Sidman, 1960).

The patterns of socially anxious behavior potentially identified by the FISA may be observable in individuals with or without SAD; however, the frequency, intensity, and duration of these behavioral responses may differ. Moreover, behavioral patterns consistent with SAD may also manifest in individuals with other clinical conditions, such as Generalized Anxiety Disorder and Avoidant Personality Disorder, as well as in persons considered shy or even extroverted. Therefore, regardless of whether all five functional criteria required to achieve a diagnosis of SAD, the FISA nonetheless remains clinically relevant as long as behavioral patterns associated with distress are identified.

Regarding the reliability and validity of the information collected by the FISA, behavior analysts have a particular preference for the use of direct behavioral observation as the gold standard for data collection. However, this does not imply a rejection of methods that utilize verbal reporting by respondents, especially since it is widely recognized that no other way exists to access covert events except through the individual's verbal reporting (Carrara, 2008; De Rose, 1999). Bolsoni-Silva and Loureiro (2010) elaborated and validated a functional interview that is methodologically recognized and has been adopted by both behavior analysts and psychologists in general. This instrument is based on the same principles by which the FISA is presented, i.e., it

does not serve as a substitute for direct behavioral assessment, but rather as an additional tool to assist clinicians and other health professionals.

However, as with any other assessment instrument (Carrara, 2008), the use of the FISA requires evaluator training. In the absence of specific training, the reliability of the data collected by the FISA is compromised. Moreover, collecting information from the interview is only the first step in establishing parameters for comparison with functional criteria. The mere occurrence of behavioral elements, even those associated with SAD, does not in itself constitute a diagnosis; there must be a specific functional relationship between the behavioral events. Thus, it is necessary to follow a sequence of steps to determine whether the behavioral pattern being evaluated corresponds to socially anxious behavior, which can only be ensured after proper training and supervision of the use of this instrument.

A potential advantage of using the FISA is that it enables the collection of information that may be relevant for developing an individualized treatment plan for individuals with SAD. The FISA guides the professional during the *clinical investigation* stage that precedes the *behavioral intervention* stage in behavior-analytic therapy. During the clinical investigation, the FISA directs the search for data necessary to conduct a *contingency analysis* of the behavioral episodes related to the clinical complaint, providing a significant portion of the substantiating information required to proceed with the *functional assessment* of the case under analysis. All these activities that comprise the *clinical investigation* are necessary prerequisites that form the basis for case *formulation* in BA, a stage in which, among other things, the problem is described in behavioral terms, and potential intervention targets can be identified.

It is important to recognize that the FISA has limitations. For example, the functional interview only investigates DSM-5 criteria and does not account for potential contingencies associated with functional classes of responding characteristic of SAD that fall outside these criteria.

The FISA also does not encompass the investigation of behavioral patterns that represent desirable behavior in social situations. In line with Goldiamond (2002), who proposed investigating not only the behavior of interest but also desirable alternative behavior, it is emphasized that these patterns are important because they guide both the clinician and client toward the path to be pursued throughout treatment. Other idiographic behavioral classes may also remain beyond the scope of FISA investigation. Therefore, the use of this interview does not negate the importance of an individualized assessment aimed at offering the client an intervention "tailored" to their idiosyncrasies.

In addition to limitations specific to the FISA, there are also limitations inherent to the use of indirect investigative instruments (Alonso & Moscoso, 2017), such as the possibility of bias (information, memory), for example. Finally, this work detailing the development of the functional interview also suffers from limitations, including the need for validation and empirical testing of the FISA. These actions are planned in future projects.

Final Considerations

This study demonstrated that it is possible to design a tool that allows for the investigation of behaviors characteristic of SAD using a functionalist model of behavior. The FISA embodies the possibility of an instrument grounded in the theoretical and methodological assumptions of behavior analysis, while also aligning with the prerogatives required by diagnostic manuals widely adopted by health professionals, such as the DSM-5, making the functional investigation of socially anxious behavior patterns feasible in clinical contexts.

Future research may also compare the use of the FISA with other instruments recognized as gold standards for the diagnosis/severity assessment of SAD to determine its reliability, sensitivity, specificity, and accuracy. These investigations could also evaluate correspondence between the diagnosis of SAD according to DSM-5 criteria and socially anxious behavior identified through functional criteria.

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