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The "Clinical Interview for Psychotic Disorders" (CIPD): Development and expert evaluation

Maria João Martins[1], Célia Carvalho[1,2], Paula Castilho[1], Ana Telma Pereira[3], and António Macedo[3]

[1]CINEICC, Faculty of Psychology and Educational Sciences, University of Coimbra. Portugal; [2]Department of Educational Sciences, University of Azores, Portugal; [3]Department of Psychological Medicine, Faculty of Medicine, University of Coimbra, Portugal

Abstract

Background: New treatment approaches for psychosis indicate that effective interventions require a therapeutic focus on emotional regulation, cognitive appraisals, and functioning. Efficacy of psychotherapeutic interventions' evaluation has changed from exclusively assessing symptom frequency/severity to a comprehensive and functional assessment of interference, functioning, and the relationship people have with symptoms. This shift led to new needs in clinical assessment. This study aimed to develop and submit to expert evaluation a new clinical interview for psychotic disorders which considers the new needs of the field.

Methods: CIPD was developed by a multidisciplinary team considering the DSM-5 criteria for psychotic and affective disorders. Relevant information was retrieved from leading research in the area of assessment and evaluation of interventions in psychosis. An expert panel of recognized professionals in the main areas of mental health evaluated each question of the interview (5-point Likert scale) regarding pertinence and clarity.

Results: A detailed description of CIPD is presented. Results from the experts' evaluation showed that, overall, the CIPD questions were evaluated as pertinent and clear for the target population.

Conclusion: CIPD assesses both diagnosis or presence of psychotic symptoms and symptoms' psychosocial correlates. Psychotherapy and pharmacotherapy may benefit from CIPD since it may detect subtle changes caused by intervention and changes in areas other than symptom reduction.

Keywords: Assessment, CIPD, Clinical Interview, Psychosis.

Background

Psychotic disorders are defined in the DSM-5 [1] as encompassing five specific domains of psychopathology: hallucinations, delusions, disorganized thought (speech), disorganized or abnormal motor behavior (including catatonia), and negative symptoms. The term 'psychotic disorder' as a clinical entity can be used as a generic diagnostic term since it covers a set of severe conditions usually associated with high levels of adjustment difficulties, suffering, and poor clinical (psychopathological and physical) and social outcomes [2]. Nevertheless, several longitudinal and long-term studies have showed rates of approximately 50% for significant improvement and relative independence in functioning outcomes, as well as rates of approximately 25% for full recovery (for a review see [3]) in severely mentally ill patients.

Clinical assessment in psychosis

There are several assessment instruments for assessment of the psychosis spectrum: both in clinician-rated form and patient self-report form. The most widely used clinician-rated instruments including assessment of psychotic symptoms are: a) the Brief Psychiatric Rating Scale (BPRS [4]), a scale designed to measure several psychiatric symptoms along a 1-7 scale, including mood, behavioral, and psychotic symptoms among others; and b) the Positive and Negative Symptoms Scale (PANSS [5]), a scale designed specifically to assess severity of psychotic symptoms also in a 1-7 rating scale, encompassing scales of positive and negative symptoms and general psychopathology. Recently, the Signs and Symptoms of Psychotic Illness (SSPI[6]) – a 20 item scale assessing 6 major psychopathological processes, common in psychosis – was developed with the aim of overcoming limitations of the two previously described instruments.

Research context-specific interviews and symptom-based instruments such as the following examples have also been developed and are widely used: a) Di- agnostic: the Diagnostic Interview for Genetic Studies (DIGS [7]), Diagnostic Interview for Psychoses (DIP [8]), or the Psychiatric Interview for Genetic Studies (EP-GENE [9]); b) Symptom-specific: the Clinical Assessment Interview for Negative Symptoms (CAINS [10]); Psychotic Symptom Rating Scale (PSYRATS [11]) for hallucinations and delusions.

Interviews for genetic studies may be of particular utility in terms of epidemiological and genetic research and for initial assessment of diagnosis in clinical practice rather than for a comprehensive assessment of symptom severity or change. They are often extensive and particularly diagnosis and phenomenology-oriented. On the other hand, al- though symptom-specific instruments are often more practical for clinical contexts and very comprehensive in terms of symptom severity, the diagnosis-valence is not always present or sufficiently addressed (e.g. PANSS).

The Recovery model and assessment challenges

Notwithstanding the tradition of looking at psychotic disorders as exclusively biological conditions requiring mostly treatment within a biological framework, research stressed out the benefits of a bio-psycho-social approach with psychosocial interventions playing a major role in coping with symptoms, reducing the disease's burden, and enhancing patients' lives. Particularly interventions based on the theory of learned behavior and cognitive mediation – mainly cognitive-behavioral therapy – have been shown as effective for this population [2, 13-15].

The recovery model in mental health has been receiving growing attention in the field of psychotic disorders, mainly in schizophrenia. Although still an evolving and rather controversial concept, recovery has been defined as a complex and multidimensional process that can be characterized under two different approaches: objective aspects of recovery (recovery as an outcome) and subjective aspects of recovery (recovery as a process). Recovery as an outcome is based on whether certain operationally defined criteria in certain domains (usually regarding psychopathology and functioning) are met, and recovery as a process is more related to the subjective process of changing and embracing a meaningful life [16] (with several guiding principles being highlighted, such as self-directedness, empowerment, and hope among others [17]), this being independent of the person's clinical improvement [18]. These different definition approaches were also shown to be dependent on who is defining recovery. For example, researchers defining it more in terms of outcome criteria versus patients or family members defining recovery as an ongoing change process [19]. Studies did not reveal an association between symptom severity (objective recovery) and subjective self-report of being in recovery [18]. The 'recovery journey' has been associated with several characteristics, such as being an active, unique, multidimensional, and non-linear process, evolving through stages, encompassing different processes, namely connectedness (with others/community), hope and optimism about the future, identity, meaning in life, and empowerment [20].

Research informing clinical practice has been suggesting recovery-informed interventions where the therapeutic tools and techniques should support recovery processes [20]. Therefore, interventions should be strengths-based and promote a richer and more positive self-experience across several dimensions. Psychotherapeutic interventions have been shifting from a symptom-focused approach to a more person-based approach, highlighting the importance of valued living directions, relationship with thoughts and emotions, acceptance and willingness towards experiences and non-judgmental attention (e.g. [21,22]).

In order to provide evidence-based interventions—as recommended in international guidelines [23] – and considering the different targets proposed by the new models of intervention in psychosis, this paradigm shift in intervention should be accompanied by changes in assessment.

This shift to an approach more focused on a growth, self-development, empowering process led to new advances in the assessment of psychosis. Several instruments measuring personal recovery from psychosis have been proliferating in the past years. Some commonly used instruments are the Recovery Assessment Scale [24] (41 items assessing mainly hope and self-determination), the Mental Health Recovery Measure [25] (a 30-item scale measuring constructs as self-empowerment, self-redefinition, functioning, well-being, among others), the Self-Identified Stage of Recovery [26] (a brief measure aiming to assess the stage of recovery of the consumer, from one's own perspective), the Illness Management and Recovery Scales [27] (mea- sure with client and clinician versions measuring aspects of illness management and recovery), among others.

With the intention of summarizing and critically analyzing data for the existing measures, several comprehensive and integrative systematic reviews on existing and psychometrically tested self-report measures specifically developed for severe mental illness, mainly psychotic disorders emerged [28-30]. The Recovery Assessment Scale has been suggested as the best available measure (e.g. [28,29]). Interestingly, along with the evolution of assessment measures for personal recovery, the recovery orientation of mental health services has also been of major interest in research, with several measures being developed (for a review see [31]).

Despite the growing body of research in assessment tools within the Recovery Model, symptom assessment tools and diagnostic interviews seem to be somewhat aside of this movement, and clinicians and researchers usually have to combine several assessment instruments in order to perform an integrative assessment. Furthermore, even considering symptom assessment, it is important to understand the relationship people have with symptoms (e.g. conviction, perceived interference, and empowerment) in addition to frequency, severity, and duration, since such an assessment provides clinicians with intervention targets that have been associated with improvement (e.g. less symptom believability associated with lower rates of re- hospitalization [32]).

Therefore, the present study had two major objectives. First, we aimed at developing a user-friendly, clinically relevant, comprehensive, and practical clinical interview that could be used both in research and clinical settings. We intended to provide researchers and clinicians with an assessment tool developed for assessing both diagnosis or presence/absence of psychotic symptoms, the psychosocial correlates of the symptoms (such as the relationship with symptoms, empowerment or interference caused by symptoms) and the most relevant co-morbidities (and their possible relationship with psychotic symptoms). Therefore, we intended to develop a clinical interview that allows a comprehensive assessment of symptom change (evaluation of clinical interventions). Moreover, to our knowledge there are still no interviews based on DSM-5 criteria specifically developed for psychotic-spectrum disorders.

The second goal was to submit the developed interview to the quantitative and qualitative evaluation of an expert panel in order to preliminarily assess content validity.

Methods

CIPD rationale and development

The CIPD was developed by a multidisciplinary team that comprised professionals from Psychiatry or Psychology backgrounds with experience in both: a) assessment and clinical intervention; and b) development and validation of assessment tools, including diagnostic interviews (for severe mental illness and other psychiatric populations).

With the DSM-5 release, the psychotic-spectrum diagnostic assessment is in need for updated assessment tools, particularly clinical interviews. Thus, the CIPD was developed based upon the DSM-5 criteria for psychotic disorders, mood-related disorders, and to a lower extent sub- stance-use related disorders, social anxiety disorder, and trauma-related disorders (the main focus being on the psychotic symptoms). The in-depth and critical analysis of the DSM-5 criteria constituted the basis for the development of the diagnostic valence of the interview. Additionally, international guidelines were consulted in order to refine the assessment of specific symptoms (e.g. the 'National Institute of Mental Health's consensus conference on negative symptoms' [33]). The additional phenomenological assessment questions were derived from literature review and discussion between clinical psychologists and psychiatrists with expertise in psychotic disorders and severe mental illness.

One of the main strengths of the CIPD, in comparison with interviews designed exclusively for a diagnostic purpose, is that it also includes several additional questions and ratings not needed or intended for diagnostic purposes. This clinical valence of the CIPD aims at evaluating the psychosocial correlates of the symptoms and, therefore, at being useful throughout the therapeutic process (identifying targets for intervention, assessing change, evaluating the efficacy of interventions). These questions and ratings were also derived from literature review and discussion of clinical practice. Several existent diagnostic and symptom assessment interviews (psychotic-spectrum and other dis- orders) were also analyzed and discussed for strengths and limitations.

The development of the optional section (assessing social anxiety and trauma) was motivated by recent research emphasizing social anxiety symptoms and post-traumatic symptoms to the psychotic experience. The co-morbidity of psychotic-spectrum disorders and social anxiety disorder is widely known (e.g. [34]). On the other hand, the experience of a psychosis diagnosis and psychotic symptoms has been considered as a challenging or traumatic life event (e.g. [35]) and several studies have associated the occurrence of psychotic symptoms with post-traumatic stress disorder (e.g. [36]). Therefore, this optional section aims at assessing symptoms that can be ameliorated with intervention.

A main concern during the development process was the inclusion of the patients' views and opinions regarding their experience. The CIPD tries to promote an active participation by the patients

instead of them being mere passive subjects of the clinical assessment. In our opinion, this is a major limitation of the existing interviews.

The CIPD evolved from multiple drafts. After agreement from the development team, the CIPD was then sub- mitted to an expert panel evaluation in order to assess: the relevance of the items and the clarity of language for the specific population (procedure below). All rating forms and observations were analyzed. Questions with overall low scores suffered major transformations or were eliminated. Based on quantitative and qualitative data obtained, the sections with major modifications were the 'Delusions' subsection (question reformulation), 'Negative symptoms' subsection (question reformulation and additional questions were added for better assessment), the 'Disorganized Behavior and Speech and Catatonia' subsection (question reformulation, elimination of questions particularly regarding observable behavior). In all sections, assessment of interference, frequency, and severity were refined with additional questions and key instructions for the inter- viewer. In order to obtain more reliable scores regarding negative symptoms, disorganization and motor symptoms, questions were also reformulated to include ratings based on clinical observation ('Clinical observation items' with specific instructions and recommendations) when the interview aims to assess current symptoms in "the last week".

Expert panel evaluation

Participants

A group of 17 professionals with extensive experience in working with psychotic-spectrum disorders were invited to join an expert panel whose purpose was to critical- ly evaluate the CIPD. We benefited from the evaluation of 6 psychiatrists, 5 clinical psychologists, 4 nurses (with specialization in Mental Health and Psychiatric Nursing) and 2 social workers (working in severe mental illness settings). The participants had in average 17 years of professional experience in severe mental illness and psychotic disorders settings (5 to 32 years). Participants were part of community mental health teams specialized in psychotic disorders, worked in first psychotic episode services, dual disorder diagnosis units and/or in acute inpatients units.

Procedure

The experts were asked to carefully analyze and evaluate the interview in terms of two criteria: a) pertinence of the items and b) clarity of language (for the specific population) along a 0 (not at all pertinent/clear) to 5 (extremely

pertinent/completely clear) scale. All questions of the interview were intended to be rated and a rating form was distributed with the interview. Participants were instructed to write suggestions, comments and critiques whenever they felt appropriate. For all questions with a score (either on pertinence or clarity) below 3 the participants were asked to correct or suggest modifications to the question.

Results

CIPD basic format

The CIPD is a new semi-structured clinical interview, based on DSM-5 criteria, for the assessment of the psychotic-spectrum.

In order to better meet the objectives of the clinician/ researcher, the CIPD can be used with different timeframe periods. At the beginning of the interview, the clinician/ researcher must choose the time period that best suits the assessment goals (e.g. lifetime for diagnosis; last week for monitoring change/evaluation of interventions) and follow the instructions that help the participant to better understand the period of time to which all the interview will be referring to. An important note is that there are slight differences in assessment depending on the time period chosen. For example, if the assessment is focusing on the present moment (last week) some ratings should be made by clinical observation (e.g. disorganization, some negative symptoms), but when assessing under a lifetime perspective, questioning should be privileged.

The CIPD follows a clinical approach of interviewing where questions are grouped by diagnosis and criteria for a specific diagnosis. If the patient fails to meet certain criteria, the interview provides "skip out" instructions directing the interviewer to the following criteria or diagnosis. The diagnosis sections tend to begin with an introduction to the section (what is going to be assessed) followed by one or two direct close-ended questions about specific symptoms (inviting a 'Yes' or 'No' response). If there is a positive answer, the CIPD allows the clinician/researcher to gather comprehensive symptom information through a) requests for elaboration; or b) follow up questions (inviting more elaborate answers). It could be necessary for the interviewer to ask more questions in order to understand the presence/severity/interference of the symptoms. Regarding specific symptoms (known to be of difficult assessment either because of stigma/shame issues or lack of insight), additional questions are already suggested as supplementary questions. On the other hand, if a symptom is clearly present (e.g. delusions, negative symptoms) it should be scored accordingly even if the patient denies it. There are adaptations in several questions for patients with poor insight (in sections where insight might be particularly compromised). This interview also has a clinical focus on the current psychosocial impact of symptoms. At the end of each psychotic symptom section, the participant is asked to rate the interference associated with the symptom along a 0

(no interference) to 5 (extreme interference) scale. In the delusions section, the participant is also asked to rate the conviction associated with the belief (0 – I currently do not believe this - to 5 – I currently am certain that this corresponds to reality – scale). At the end of each psychotic symptom section

(delusions, hallucinations, negative symptoms, disorganization and catatonia) the patients are also asked to place themselves in a continuum (with the aid of a visual analogue scale) regarding the perceived sense of empowerment towards symptoms (see **Figure 1**). In the substance use section the interviewer asks the participant about motivations for substance use, including motives linked to psychosis, along a 0 (I never use [substance] be- cause of that) to 5 (I always use [substance] because of that) scale. At the end of each major section, participants are also asked to evaluate how the difficulties in the area just assessed have disturbed their lives (0-5 scale) in different areas (family, romantic relationship, work/school, social relationships, finances, and daily routine).

The clinician has to evaluate symptom severity, frequency and interference along a 0 (Minimal severity, with- out clinically relevant distress | Not present | No interference at all) to 5 (Maximal Severity – it may represent danger to self or others | Occurs constantly | Major interference in all areas of life, seriously impaired functioning with difficulties in activities of daily living) rating scale. All points of the interviewers' scales are defined at the beginning of the interview. **Figure 2** presents the summary table with instructions for clinician-rated measures and patient-rated scales that is provided for each psychotic symptom and that can be converted in quantitative scores.

Sections of the CIPD

The CIPD comprises a brief open-ended questioning over- view followed by three mandatory sections and one optional section. The mandatory sections are only mandatory if the objective is to perform diagnosis. The CIPD can also be used to evaluate the efficacy of interventions and there- fore clinicians/researchers can apply only the sections of interest (e.g. psychotic symptoms section to assess change in severity, conviction, interference, or empowerment regarding psychotic symptoms). The sections of the CIPD are described in detail below.

1	2	3	4	5
Less capable/Nothing I can do/No hope				Definitely capable/I have tried things/Certain of improvement

Component	Guiding descriptions	A	B	C
Perceived ability to cope	I do not feel at all capable of dealing with it			
	I feel I am barely capable of dealing with it			
	I feel I am moderately capable of dealing with it			
	I feel I am quite capable of dealing with it			
	I feel I am definitely capable of dealing with it			
Perceived control & Ideas to improve*	I feel that none of the aspects of these difficulties are at all dependent of me (there is nothing I can do. I have no ideas).			
	I feel that the aspects of these difficulties are not only dependent of me (there are few I can do. I have ideas but I do not think I could act on them).			
	I feel that some aspects of these difficulties are dependent of me (there is something I can do. I have ideas that I intend to try in the future)			
	I feel that some aspects of these difficulties are dependent of me (there are several things I can do. I have ideas that I intend to try soon)			
	I am certain that some aspects of these difficulties are dependent of me (there are several things I can do. I have already acted on my ideas)			
Hope	I do not have any hope that improvement is possible.			
	I have little hope that improvement is possible.			
	I have some hope that improvement is possible.			
	I am quite hopeful that improvement is possible.			
	I am certain that improvement is possible.			

Note: A=Delusions; B=Hallucinations; C=Negative Symptoms; D=Disorganization and Catatonia; *The ideas to improve does not have to agree with mental health professionals' therapeutic plans (e.g. taking medication, going to appointments), these are ideas the patient considers to be useful.

Figure 1. Measuring empowerment regarding psychotic symptoms. A=Delusions; B=Hallucinations; C=Negative Symptoms; D=Disorganization and Catatonia; *The ideas to improve does not have to agree with mental health professionals' therapeutic plans (e.g. taking medication, going to appointments), these are ideas the patient considers to be useful.

Item to assess	Clinician-rated (CR) / Participant-rated (PR)	Guiding questions and instructions*
Duration	CR	For how long did/do the [symptom] last? (days/weeks/months/years?)
Conviction	PR (0-5 rating scale)	How much do you think this idea [symptom] corresponds to reality? How much do you believe this to be true?
Interference	PR (0-5 rating scale)	How much do you think this [symptom] interferes with your life? It may be necessary to explain what interference means (see questions of Interference CR)
Interference	CR (0-5 rating scale)	How does [symptom] affect you emotionally? Does the [symptom] influence your everyday life? Your ability to work? What did you stop doing/became difficult to do because of [symptom]? Do you have new behaviors/actions because of [symptom]? Did [symptom] alter your relationship with others? How? (+ previous questions + clinical observation)
Frequency	CR (0-5 rating scale)	Does this [symptom] appear every day/week/how often? (+ previous questions + clinical observation)
Severity	CR (0-5 rating scale)	(previous questions + clinical observation)

Note: *All ratings (except for duration) refer to the current symptomatology. Current symptomatology can be considered in a period of 1 and a half months (maximum) for participants without present symptoms.

Figure 2. Guiding questions for clinician and participant-rated scores. *All ratings (except for duration) refer to the current symptomatology. Cur- rent symptomatology can be considered in a period of 1 and a half months (maximum) for participants without present symptoms.

Introduction

The first moments of the interview are aimed at establishing a non-directive relationship with the patient. The interviewer is instructed to explain the functioning of the CIPD and provide all explanations about procedures. The time period that will be used must be clarified at this moment (following instructions provided). This overview ends with an open-ended question about possible problems/difficulties that the participant might have/had in the past. This section also includes a rating scale (assessed by the patients and their clinicians) regarding adherence to anti-psychotic medication.

Psychotic-spectrum disorders

The first section aims at a detailed assessment of psychotic (positive and negative) symptoms and is divided into two sub-sections. In the 'positive symptoms' section, the CIPD comprises the assessment of delusions and hallucinations—with specific questioning for the most common delusion themes and hallucinations' sensory modalities. It has also additional phenomenological assessment concerning thought alienation. Disorganized speech, behavior, and catatonia are also targets of assessment. The 'negative symptoms' section includes assessment of blunted/ inappropriate affect, alogia, anhedonia, asociality, and avolition. This section also provides questions aimed at assisting the differential diagnosis between negative and depressive symptoms. In all subsections, there are questions that allow to specify whether symptoms occur(ed) during depression, mania, substance use, medical illness or in the absence of these conditions.

Mood-related disorders

The second section aims to evaluate major dysfunction- al humor episodes (depressive, manic, and hypomanic). A guided differential diagnosis subsection with bereavement is provided (following DSM-5 criteria) for use when appropriate. This section also allows a qualitative assessment of self-concept and social comparison with others and assessment of suicide risk (current signals, past risk factors and present association between psychotic symptoms and suicidality).

Substance-related and addictive disorders

The third section provides questions aiming at assessing the presence of alcohol and cannabinoid-related disorders and associated interference. These two substances were selected because they are usually the most prevalent in combination with a psychotic-spectrum disorder. Taking into consideration that some patients have poor insight, some questions are adapted to these cases. Optional questions about the motives that precede substance use are provided, including motivations related with psychotic symptoms (alleviation/elimination) and medication side effects.

Associated Symptoms [Optional]

In this last optional section, the CIPD allows clinicians to assess the presence of social anxiety symptoms and trauma related to the psychotic experience (that might include psychotic episodes, hospitalizations, and stigma).

Appendices

At the end of the interview is provided a table illustrating the correspondence between the CIPD questions and the items required to score the Operational Criteria Checklist for Psychotic Illness (OPCRIT 4.0[37]).

Diagnosis included and diagnosis-independent ratings

The following diagnoses can be generated by the CIPD:

1) Section 1: Psychotic-Spectrum disorders – Delusional Disorder [297.1 (F22)]; Brief Psychotic Disorder [298.8 (F23)]; Schizophreniform Disorder [295.40 (F20.81)]; Schizophrenia [295.90 (F20.9)]; Schizoaffective Disorder [295.70 (F25.0/1)];

2) Section 2: Humor-related disorders – Major Depressive Disorder [296.xx (F32/33.xx)]; Bipolar I Disorder [296.xx (F31.xx)] e Bipolar II Disorder [296.89 (F31.81)];

3) Section 3: Substance-related and addictive disorders: Alcohol use disorder [305/3.xx (F10.xx)]; Cannabis use disorder [305/4.xx (F12.xx)].

In the optional section (Section 4: Associated Symptoms) no diagnoses can be defined, nevertheless the clinician/researcher can de- rive important information about social anxiety and trauma associated with the psychotic experience. Throughout the interview, if there is evidence of other (primary or co-morbid) disorders not covered by CIPD, other assessment tools must be used.

Several diagnosis-independent ratings are available for each set of symptoms, such as severity, conviction, frequency, interference in several areas of life, and empowerment. These ratings are performed both by the interviewer and the participant. The interview also allows a 'risk of suicide' score and independent scores for several motives for substance use.

CIPD Output

The CIPD has a checklist at the end which helps the clinician/researcher to organize the qualitative, categorical, and quantitative information gathered and establish diagnostic output and a differential diagnosis. The interview also provides several quantitative subscales for objective severity, frequency, and interference of psychotic, mood and substance use-related symptoms (clinician-rated— through provided rating scales) and conviction (regarding delusional activity) and perceived interference in several areas of life (all sections) (patient-rated). A total score of empowerment is also an output for psychotic symptoms. These scales can be combined in total scores for frequency of positive symptoms; severity of positive

symptoms; severity of negative symptoms; interference of positive symptoms (interviewer rated and patient-rated); interference of negative symptoms (interviewer rated and patient-rated). It is also possible to compute a total score regarding the psychotic illness. A total score of interference for each area is provided as well, since the patient is also instructed to assess subjective interference of the positive and negative symptoms in the various areas of life (family; work/school; social relationships; finances; and daily routine), as well as a total score of empowerment with psychotic symptoms. In the mood section, the CIPD provides total scores for interference and severity of symptoms (clinician rated) and interference in several areas of life (patient rated). The same scores are available for the 'substance use' section with, additionally, individual scores for each motive for substance use. A total score for suicide risk, as well as a total score for adherence to anti-psychotic medication can also be computed. It is possible to score the OPCRIT 4.0 from the scores obtained in the CIPD.

Expert panel evaluation

The results from the expert panel evaluation are presented in **Table 1**.

Table 1
Experts Panel Evaluation: Means and Standard Deviations

	Highest possible score	Clinical Psychologists *n*=5 Mean (SD)	Psychiatrists *n*=6 Mean (SD)	Nurses (Psychiatry) *n*=4 Mean (SD)	Social Workers (Psychiatry) *n*=2 Mean (SD) (*)
Professional experience in mental health (years)	-	16.60 (7.06)	18.50 (9.01)	23.25 (8.62)	5.50 (0.71)
Psychotic Symptoms (Total)	215				
Pertinence		117.70 (3.14)	118.95 (1.60)	120.32 (0.75)	--
Clarity		113.41 (5.77)	114.17 (4.39)	119.03 (1.15)	116.70 (2.83)
Psychotic Symptoms (Positive Symptoms - Total)	175				
Pertinence		166.54 (3.91)	167.31 (2.99)	169.39 (1.50)	--
Clarity		160.93 (7.52)	161.14 (5.44)	166.81 (2.31)	163.14 (7.07)
Psychotic Symptoms (Delusions)	65				
Pertinence		59.98 (0.89)	60.38 (0.00)	60.38 (0.00)	--
Clarity		57.11 (3.30)	57.55 (2.48)	58.60 (1.54)	56.88 (3.54)
Psychotic Symptoms (Hallucinations)	35				
Pertinence		30.11 (0.89)	30.71 (0.00)	30.71 (0.00)	--
Clarity		29.60 (0.73)	29.55 (1.33)	30.71 (0.00)	30.21 (0.71)
Psychotic Symptoms (Disorganization Symptoms)	35				
Pertinence		29.46 (1.90)	28.88 (2.40)	30.43 (0.57)	--
Clarity		29.26 (1.79)	27.88 (2.86)	29.71 (0.82)	29.21 (2.12)
Psychotic Symptoms (Negative Symptoms - Total)	40				
Pertinence		34.43 (1.30)	35.29 (0.82)	35.63 (0.00)	--
Clarity		32.95 (2.32)	33.60 (2.30)	34.88 (1.50)	35.13 (0.71)
Mood Section	90				
Pertinence		83.68 (3.05)	85.11 (0.41)	83.03 (2.87)	--
Clarity		80.48 (4.21)	82.27 (2.84)	84.28 (1.15))	85.28 (0.00)
Substance-Use Section	105				
Pertinence		99.44 (1.79)	100.24 (0.00)	98.24 (4.00)	--
Clarity		96.84 (5.08)	99.07 (1.60)	98.49 (1.50)	100.24 (0.00)
Social Anxiety Section	40				
Pertinence		35.23 (0.89)	34.77 (2.09)	34.88 (1.50)	--
Clarity		33.80 (1.91)	34.44 (2.09)	35.38 (0.50)	35.63 (0.00)
Trauma Section	35				
Pertinence		30.11 (0.89)	29.86 (2.10)	29.96 (1.50)	--
Clarity		29.29 (2.05)	30.36 (0.56)	30.46 (0.50)	30.71 (0.00)
Diagnosis specific questions	315				
Pertinence		304.87 (9.49)	306.75 (3.01)	308.08 (2.45)	--

Clarity		295.07 (12.34)	296.91 (7.89)	303.83 (3.86)	304.08 (8.49)
Diagnosis-independent ratings	95				
Pertinence		88.67 (2.61)	90.26 (0.00)	87.26 (6.00)	--
Clarity		84.46 (8.32)	87.93 (4.76)	89.93 (0.58)	88.76 (2.12)

Note: SD=Standard deviation

(*) – Considering the academic background (in terms of psychopathology) in Portugal for social workers, we instructed the two professionals to evaluate the interview only regarding clarity.

Discussion

Considering the paradigm shift in intervention and, consequently, assessment of psychosis motivated by the recovery model, the present study aimed at developing a clinically relevant, comprehensive, and practical clinical interview. This interview intended to provide an assessment of diagnosis or presence/absence of psychotic symptoms, the psychosocial correlates of the symptoms (such as the relation- ship with symptoms or interference caused by symptoms) and co-morbidities. The developed interview—CIPD—was then submitted to an expert panel for evaluation.

The expert panel evaluation revealed high scores both in terms of the pertinence of questions for diagnosis, phenomenology assessment, and psychosocial correlates of symptoms, as well as regarding language suitability for the psychosis population. This provides useful indicators of the possible acceptability of the CIPD by professionals working with psychosis populations and their perception of clinical utility. Nevertheless, this was solely a preliminary content validity evaluation and the CIPD is in need of further psychometric studies and evaluation of routine use.

Clinical relevance

A semi-structured clinical interview with the aim of assessing both diagnosis or presence/absence of psychotic symptoms and the psychosocial correlates of the symptoms is an extremely useful tool for clinicians for a) assessing intervention targets; b) monitoring change; and c) evaluating the efficacy of their psychotherapeutic interventions. After validation, the CIPD can also be useful in clinical re- search as an outcome measure in all forms of therapeutic intervention in psychosis.

In terms of practicality, the CIPD is not intended to be extensively time-consuming and the absence of detailed assessment of other (non-related to psychosis) psychiatric conditions/symptoms contributes to this end. In the over- all process of developing the CIPD, we were concerned with suiting the interview for the severely mentally ill, taking into account this population's special features such as cognitive and attention deficits, difficulties in abstract thinking, negative symptoms, poor rapport, poor mentalization and theory of mind skills, and difficulties in inter- personal relationships. This concern was aimed at reducing the patient's and clinician's burden in the diagnosis and assessment process (this advantage is also transposable to research settings where reducing the participant's burden is even more advised). A clinical interview that allows both symptom and diagnostic assessment and subjective experience of symptoms and psychotic illness in a manner congruent with the Recovery model for severe mental illness offers important advantages. The fact that two important components of clinical assessment are covered with a sin- gle instrument (instead of using multiple assessment tools) can contribute to lighter assessment (and, therefore, a more valid one). Nevertheless, the CIPD does not aim at replacing or constituting itself as an alternative to other tools developed considering the recovery approach (assessing non-symptom

related specific aspects of recovery) and a combination with those instruments may be needed for an integrative assessment. For instance, although the 'empowerment with symptoms' scales' provided by CIPD were developed based on 'empowerment' definitions congruent with the Recovery Model, they do not intend to measure empowerment in a global sense (in terms of life directedness, independence of health services, social empowerment, and other more general components). Since CIPD is an interview for psychotic symptoms (although assessed in a way not exclusively focusing on symptom frequency/severity) the main aim of the empowerment scales is to understand the way people experience symptoms to be in their control, believe in the possibility of improving difficulties, have sense of hope and plans for improvement. The potential advantage of CIPD is to include a wider assessment of symptoms and relationship with symptoms in a tool that also allows for diagnostic purposes.

Recommendations and future directions

Given the semi-structured nature of the CIPD, this inter- view is designed to be administered by interviewers that: a) have basic understanding of psychopathology, mental state examination, psychiatric disorders, and in-depth knowledge of psychotic disorders; b) are familiar with assessment and diagnostic procedures; c) are able to exercise clinical judgment (further questioning for differential diagnosis when needed and for decision-making based on direct observation of manifest psychopathologic symptoms in the context of poor insight). It is recommended that the clinician/researcher have some time available after the interview in order to review answers and score the rating forms. In spite of the information collected through the expert panel, the CIPD's clinical and research utility should be tested in clinical and research settings. The validation of the CIPD is already under way with the following parameters: a) interrater reliability; b) convergent and divergent validity of specific sections of the CIPD; c) sensitivity and specificity (ability to detect differences in different psychotic diagnostic categories and ability to correctly identify the diagnosis given by the patient's psychiatrist); c) factor structure of the quantitative ratings; and d) predictive validity (measuring change after clinical intervention).

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Competing interests

The authors declare no conflict of interest.

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