

**Polish version of *the Structured Interview  
For Psychosis-Risk Syndromes (SIPS)*  
– description of the tool**

Monika Mak<sup>1</sup>, Anna Starkowska<sup>1</sup>, Ernest Tyburski<sup>2</sup>,  
Jerzy Samochowicz<sup>1</sup>

<sup>1</sup>Pomeranian Medical University in Szczecin, Department of Psychiatry

<sup>2</sup>University of Szczecin, Department of Clinical Psychology and Psychoprophylaxis

**Summary**

In medicine, early disease detection is crucial, as it enables early intervention and increases the likelihood of successful treatment. Psychoprophylaxis is directed to persons from the so-called high-risk groups. First episode psychosis is usually preceded by various difficulties in day to day functioning, which due to their non-specific intensity or duration are hard to classify as symptoms of a mental disorder according to available classifications of diseases. There is evidence that using early intervention like elements of cognitive behavioral psychotherapy (CBT) at that stage could prevent or defer the development of psychosis. Identification of potential recipients of such intervention, however, is difficult, especially without appropriate diagnostic tools. One of the diagnostic methods that could be useful in the daily clinical practice is *the Structured Interview for Psychosis-Risk Syndromes (SIPS)*, which is a partly structured interview of proven predictive value, and also a valid and reliable tool. This paper presents the Polish translation of the tool, which is currently undergoing a full adaptation procedure to ultimately verify its usefulness in research and clinical practice.

**Key words:** prodrome, psychosis, ultra-high risk, the SIPS

**1. Introduction**

Detection of any disease as early as possible is crucial in medicine. It enables early intervention and increases the likelihood of successful treatment. Preventive actions are directed to persons from the so-called high-risk groups, to which they are classified on the basis of the detected/recognized genetic or environmental factors. Psychiatric treatment applies mostly to individuals who have already developed the illness, often in its severe form. In recent years, there has been increasingly more research with the

aim to identify groups at high risk of developing a mental illness and detect the so-called prodromal symptoms.

Schizophrenia is currently considered a severe neurodevelopmental disorder. Before the first episode of psychosis, usually in childhood and adolescence, there appear certain difficulties, mostly related to one's academic functioning and conduct, which are examined in a retrospective manner, allowing to establish a pattern for detecting the criteria of high-risk or prodromal symptoms of psychosis, including schizophrenia. Research indicates that early implementation of specific preventive methods, e.g., cognitive behavioral interventions or pharmacotherapy, may lead to the postponement of the onset of the first episode, and possibly even its prevention (according to guidelines of the European Psychiatric Association) [1]. Even in the case of development of full-blown schizophrenia, monitored patients have a chance to undergo treatment immediately, which seems crucial in light of studies which show that the longer they remain without it, the less likely their remission, both in biological and clinical terms. However, in accordance with Polish standards for the treatment of prodromal conditions, or rather high-risk conditions, such diagnosis is not enough reason to administer pharmacological antipsychotic treatment, as not only may it not improve the patient's condition, but it may sometimes lead to occurrence of side effects. Therefore, in line with the recommendations of the International Early Psychosis Association Writing Group (2005), pharmacotherapy is considered only in the case of progressive deterioration, especially cognitive, suicidal tendencies, lack of remission of depression and aggressiveness. Otherwise, careful observation and therapeutic interventions are recommended, with particular preference of CBT [2].

In an attempt to describe the condition prior to the full-blown schizophrenia, there was once coined the term 'latent schizophrenia', later replaced with the term 'prodrome' [3, 4], a state rather non-specific symptomatically, but according to the traditional approach, constituting an actual phase of the illness [5]. It also became clear that the results of retrospective studies based on subjective data were not fully reliable, and therefore, there was a shift towards prospective studies. Reports from prospective analyses laid foundation for appearance of new diagnostic criteria, labeled as 'at risk mental states' (ARMS), 'ultra high-risk syndrome' (UHR) and 'prodromal risk syndrome' [6]. As already mentioned, the traditional 'prodrome' was considered the first phase of the illness, whereas the above terms are not construed as any particular medical condition and do not necessarily have to lead to the clinical diagnosis of schizophrenia. The International Early Psychosis Association (IEPA) suggests the following as the diagnostic criteria of the ultra high-risk syndrome (UHRS):

#### **Group 1 – Vulnerability**

Psychotic episode in a first-degree relative or met criteria for schizotypal personality disorder (according to DSM-IV).

Deterioration of mental state or functioning for at least one month, but no longer than five years.

Significant impairment in functioning in the past year.

**Group 2 – Attenuated psychosis group**

Presence of at least one of the following symptoms:

- ideas of reference;
- bizarre beliefs that do not reach the intensity of delusions, or magical thinking;
- paranoid thinking;
- fleeting disturbance of sensory perception;
- bizarre communication, or slight disorganization of thought;
- bizarre behavior or appearance.

Symptoms occur at least several times a week.

Symptoms are present for at least a week, but not longer than five years.

Symptoms have been present over the past year.

**Group 3 – Brief limited intermittent psychotic symptoms (BLIPS)**

Presence of at least one of the following symptoms:

- delusions;
- magical thinking;
- perceptual abnormality;
- paranoid thinking;
- disorganized thinking and speech.

Symptoms occur at least several times a week.

The episode lasts less than a week.

Symptoms resolve spontaneously [5].

Prospective studies indicate that the illness manifests itself in an average of about 35–49.4% of persons at risk (based on specific criteria) [7–9]. The natural consequence of such research results seems to be implementation of appropriate preventive actions, e.g., cognitive behavioral therapy or pharmacotherapy – and monitoring of their results [10].

An important challenge for researchers is to raise the awareness of medical personnel and equip them with the necessary competencies for professional use of the diagnostic tools which enable identification of persons at risk of developing schizophrenia. Such methods are, among others, *the Bonn Scale for the Assessment of Basic Symptoms* (BSABS) [11], *the Comprehensive Assessment of At Risk Mental States* (CAARMS), which has been translated into Polish [12], and *the Structured Interview for Prodromal Syndromes* (SIPS) [13].

Given the results of studies indicating its usefulness in detecting high-risk states of developing serious mental disorders, including psychoses, we decided to translate the tool into Polish in order to carry out the Polish validation of the SIPS.

## 2. SIPS overview

The SIPS is a structured interview with the aim to:

- Rule out past and/or current psychosis;
- Rule in lifetime history of one or more of the three types of psychosis-risk syndromes;
- Determine the current status of each psychosis-risk syndrome that is present lifetime;
- Rate the current severity of the psychosis-risk symptoms.

The SIPS consists of several parts relating to various aspects of one's psychological functioning that are helpful in identification of psychopathological symptomatology. The form of the examination together with the sequence of individual elements of the interview are presented in Table 1.

Table 1. **Structure of the SIPS**

Structured Interview for Psychosis-Risk Syndromes (SIPS)	The Scale of Psychosis-Risk Symptoms (SOPS)
Scales and questionnaires	Positive Symptoms
Family History Questionnaire	Unusual Thought Content / Delusions
The Scale of Psychosis-Risk Symptoms (SOPS)	Suspiciousness / Persecutory Ideas
The Global Assessment of Functioning (GAF) – a modified scale	Grandiose Ideas
Schizotypal Personality Disorder (according to DSM – 5)	Perceptual Abnormality / Hallucinations
Criteria	Disorganized Communication
Presence of Psychotic Syndrome (POPS)	Negative Symptoms
Diagnosis of Brief Intermittent Psychotic Syndrome (BIPS)	Social Anhedonia
Diagnosis of Attenuated Positive Symptom Syndrome (APSS)	Avolition
Diagnosis of Genetic Risk and Deterioration Syndrome (GRD)	Impaired Expression of Emotion Impaired Experience of Emotions and Self
Current status of each psychosis-risk syndrome diagnosis (COPS 5.6)	Poverty of Thought
DSM-5 Attenuated Psychosis Syndrome (DSM-5 APS)	Impaired Occupational Functioning
	Disorganization Symptoms
	Odd Behavior / Appearance Bizarre Thinking
	Trouble with Focus and Attention Impairment in Personal Hygiene
	General Symptoms
	Sleep Disturbance
	Dysphoric Mood
	Motor Disturbance
	Impaired Tolerance of Normal Stress

### *2.1. Family History Questionnaire*

To begin with, the rater collects information about what has brought the person to the interview, their recent functioning and educational, developmental, occupational, and social history, as well as potential trauma history, medical history and history of substance use, followed by detailed family history of mental illness.

### *2.2. The Scale of Psychosis-Risk Symptoms (SOPS)*

The following parts of the interview concern the interviewed person's mental state. Part P – positive symptoms, part N – negative symptoms, part D – disorganization symptoms, part G – general symptoms. Each part includes a series of questions and space for registering responses. Raters are required to ask all the questions that are in bold. All other ones are optional and may be included for clarification purposes. The interview is semi-structured, which means that it allows additional questions, if it is deemed necessary.

The answers include: 'yes', 'no', 'no information'. All affirmative answers should be clarified with additional questions in the form of qualifiers, which are presented in the detailed description of the SOPS. There are two different scales to assess symptom severity. Positive symptoms are rated on one scale while negative, disorganization and general symptoms are assessed using the other, as will be further explained in the detailed overview of the interview later in this article.

### *2.3. The Global Assessment of Functioning (GAF) – a modified scale*

When scoring, the rater should consider the person's psychological, social and occupational functioning on a hypothetical continuum of mental health/illness. The total score can range from 1 to 100 points. Any impairment in functioning due to physical health or environmental limitations should not be included.

### *2.4. Schizotypal Personality Disorder Checklist – DSM-5*

Since genetic risk as defined by the SIPS involves meeting DSM-5 criteria for lifetime schizotypal personality disorder and/or having a first degree relative with a psychotic disorder, the interview includes a table with SPD symptoms to mark their presence or lack thereof.

### *2.5. Summary of SIPS data*

The summary includes names of scales and symptom severity ratings from 0 to 1.

## 2.6. Summary of SIPS syndrome criteria

The last key stage is to determine which criteria most accurately meet the symptoms described earlier in the subject. Criteria of the SIPS syndrome are as follows:

- *Presence of Psychotic Syndrome (POPS)*;
- *Diagnosis of Brief Intermittent Psychotic Syndrome (BIPS)*;
- *Diagnosis of Attenuated Positive Symptom Syndrome (APSS)*;
- *Diagnosis of Genetic Risk and Deterioration Syndrome (GRD)*;
- *Psychosis-Risk Syndrome (COPS 5.6)*;
- *DSM-5 Attenuated Psychosis Syndrome*.

## 3. The SIPS detailed overview and the objective of the interview

### 3.1. Rule out a past and/or current psychotic syndrome

A past psychosis should be ruled out using screening tools or general information obtained from the subject, on the basis of *the Presence of Psychotic Symptoms* criteria (POPS). Current psychosis is defined by the presence of positive symptoms.

#### 3.1.1. *The Presence of Psychotic Symptoms criteria (POPS)*

Current psychosis is defined as follows:

Meeting both (A) and (B) criteria is required.

Criterion (A) states that the following positive symptoms are present at a psychotic level of intensity (Rated at level '6'):

Unusual thought content, suspiciousness/persecution, or grandiosity with delusional conviction and/or perceptual abnormality of hallucinatory intensity and/or speech that is incoherent or unintelligible.

According to criterion (B), any (A) criterion symptom has to remain at sufficient frequency and duration or urgency. At least one symptom from (A) has occurred over a period of one month for at least one hour per day at a minimum average frequency of 4 days per week or the symptom is seriously disorganizing or dangerous. 'Dangerous' means physically dangerous to life or health. 'Seriously disorganizing' means dangerous to personal dignity or reputation.

Positive Symptoms are rated on scales P1–P5 of *the Scale of Psychosis-Risk Symptoms* (SOPS). A score of 1 to 5 on one or more of scales P1–P5 indicates a positive symptom that is at a non-psychotic level intensity. A score of 6 on one or more of scales P1–P5 indicates that a positive symptom is at a 'Severe and Psychotic' level of intensity and thus, the (A) criterion is met. Symptoms at a psychotic level will be explained further in the article, where the assessment of positive symptoms in the SOPS is explained.

The presence of a current psychosis, however, depends also upon the frequency or urgency of the (A) criterion symptom(s). If a positive symptom also satisfies the (B) criterion, a current psychosis is defined.

### 3.2. Rule in lifetime history of one or more of the three types of psychosis-risk syndromes

Here the rater is required to note that the three psychosis-risk syndromes are not mutually exclusive, which means that patients can meet criteria for one or more syndromes. Patients not meeting criteria for a past or current psychosis are evaluated on the *Criteria of Psychosis-Risk Syndromes* (COPS 5.6) for the lifetime presence of one or more of three psychosis-risk syndromes: *Brief Intermittent Psychotic Syndrome* (BIPS), *Attenuated Positive Symptom Syndrome* (APSS), and *Genetic Risk and Deterioration Syndrome* (GRD).

#### 3.2.1. *Criteria of Psychosis-Risk Syndromes* (COPS 5.6)

##### 3.2.1.1. *A diagnosis of Brief Intermittent Psychotic Syndrome (BIPS)*

It is defined by the presence of frankly psychotic symptoms that are very brief or intermittent. To meet diagnostic criteria for BIPS, a psychotic intensity symptom – SOPS score = 6 (‘severity criterion’) – must at some point have been present at least several minutes a day at a frequency of at least once per month (‘frequency criterion’), and must not have been likely due to another disorder (‘attribution criterion’). Even though these positive symptoms are or were present at a psychotic level of intensity, a current or past psychotic syndrome can be ruled out if the POPS (B) criteria for sufficient frequency and duration or urgency were not met.

##### 3.2.1.2. *A diagnosis of Attenuated Positive Symptom Syndrome (APSS)*

It is defined by the presence of recent attenuated positive symptoms of sufficient severity and frequency. To meet criteria for an attenuated symptom, a patient must at some point have rated level ‘3’, ‘4’, or ‘5’ on at least one of the P1–P5 positive symptom items of the SOPS (‘severity criterion’). The symptom(s) must have occurred at the then-current intensity level at an average frequency of at least once per week in the past month (‘frequency criterion’), and must not have been likely due to another disorder (‘attribution criterion’).

##### 3.2.1.3. *A diagnosis of Genetic Risk and Deterioration Syndrome (GRD)*

It is defined by a presence of genetic risk for schizophrenia spectrum disorder criteria (the genetic risk criterion can be met if the patient has a first degree relative with any affective or nonaffective psychotic disorder) and/or when the patient has ever

met criteria for DSM-5 schizotypal personality disorder. Functional deterioration is operationally defined as a 30% or greater drop in the GAF score within a year.

### 3.3. Determine the current status of each psychosis-risk syndrome diagnosis

For each psychosis-risk syndrome diagnosis, a current status is established. There are four current statuses: progression, persistence, partial remission, and full remission. Criteria for each status are specific for each psychosis-risk syndrome. For BIPS Progression, symptoms meeting BIPS severity, frequency and attribution criteria must be currently present and must have begun or worsened in the past three months. For APSS Progression, symptoms must have begun in the past year or must currently rate at least one scale point higher than it would if rated 12 months ago. BIPS or APSS Persistence is selected when symptoms severity, frequency and attribution criteria, but not worsening criteria, are met. BIPS or APSS Partial Remission is selected when previously qualifying symptoms no longer meet frequency or attribution criteria or have no longer met severity criteria but for six months. BIPS or APSS Full Remission is selected when no qualifying symptom has met severity criteria for more than six months.

GRD Progression requires a GAF drop of at least 30% in the previous year. When the GAF is not progressing but remains below 90% of its level 12 months prior to first lifetime qualification, GRD persistence is selected. GAF scores higher than the persistence criterion qualify for GRD Partial Remission if present for 6 months or less and for GRD Full Remission if for more than 6 months.

The SIPS also generates *DSM-5 Attenuated Psychosis Syndrome* diagnoses.

### 3.4. Rate the current severity of the psychosis-risk symptoms

Patients meeting criteria for one or more psychosis-risk syndromes are further evaluated using the SOPS rating scales for Negative Symptoms, Disorganization Symptoms and General Symptoms. While this additional information will not contribute to the diagnosis of a *psychosis-risk syndrome*, it will provide both a descriptive and quantitative estimate of the diversity and severity of psychosis-risk symptoms. Some investigators may wish to obtain a full SOPS with all patients.

## 4. Detailed overview of *the Scale of Psychosis-Risk Symptoms (SOPS)*

The SOPS describes and rates psychosis-risk and other symptoms that have occurred in the past month (or since the last rating if more recently). The aim is to rate the highest the symptom has been for at least several minutes within this time period. The SOPS is organized in four primary sections: (P) Positive Symptoms, (N) Negative Symptoms, (D) Disorganized Symptoms, (G) General Symptoms. The SOPS final ratings are recorded on a summary sheet located at the end of the SIPS.

#### 4.1. Inquiry

Within each section of the SOPS, a series of questions is listed with space provided for recording responses ('N' = no; 'NI' = no information; 'Y' = yes). All boldface inquiries should be asked. Questions that are not printed in boldface are optional and can be included for clarification or elaboration of positive responses. The interview is semi-structured, meaning that the interviewer may include additional unstructured questions if needed to establish rating.

#### 4.2. Qualifiers

Following each set of questions, a series of qualifiers is listed. Each question that elicits a positive (i.e. 'Y') response should be followed by these qualifiers in order to obtain more detailed information. For all 'Y' responses, the following should be recorded:

- Description, onset, duration, frequency;
- Degree of distress: 'What is this experience like for you? Does it bother you?';
- Degree of interference with life: 'Do you ever act on this experience? Does having the experience ever cause you to do anything differently?';
- Degree of conviction/meaning/tenacity: 'How do you account for this experience? Do you ever feel that it could just be in your head? Do you think this is real?'

Two different severity scales are used for measuring indicated symptoms. Positive symptoms are rated on one severity scale while negative, disorganized and general symptoms are rated using a second severity scale.

Anchors in each scale are intended to provide guidelines and examples of signs for every symptom observed. Basis for ratings includes both interviewer observations and subject reports. Third party reports alone do not qualify.

#### 4.3. SOPS item ratings

##### 4.3.1. *Positive Symptoms*

Ratings of 0–2 are in the normal range (with the rating of 0 being completely normal, and 1 and 2 being less frequent gradations of normal). Ratings of 3 to 5 are in the risk syndrome range. A rating of 6 indicates frankly psychotic symptom severity. It should be noted that the SOPS is different from other rating scales as it does not provide gradations for the severity of frank psychosis. A rating of 3 is when a symptom meets criteria for psychopathology (not in the normal range). The person must readily self-disclose skepticism as to the reality of the symptom. Generally the symptom is also distressing to the person and/or interferes with thinking, feeling, or social relations, but not necessarily. A rating of 4 is when a symptom meets criteria for psychopathol-

ogy that is formed or more intense. The person can still self-generate skepticism, but doing so requires some time and effort. Generally the symptom is also distressing and/or interferes with thinking, feeling, or social relations and sometimes causes a change in their behavior, but not necessarily. A rating of 5 is when there is all but delusional conviction. Skepticism can only be elicited by others. A rating of 6 is when there is delusional conviction. Raters must always consider the impact of subcultural beliefs on the item. If they are consistent with identifiable subcultural norms, it should not be rated higher than 2.

Table 2. **Positive symptoms are rated on the SOPS from 0 (absent) to 6 (severe and psychotic)**

0 Absent	1 Questionably present	2 Mild	3 Moderate	4 Moderately severe	5 Severe but not psychotic	6 Severe and psychotic
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#### 4.3.2. Negative, Disorganization and General Symptoms

A rating of 0 indicates a completely normal score, and 1 and 2 are less frequent gradations of normal. Risk syndrome patients or frankly psychotic patients can score at any level, including 0 and 6. Each severity scale is followed by a section with some space to provide a brief description of the symptom(s) and the rationale for assigning the specific rating.

Table 3. **Negative/Disorganized/General Symptoms are rated on the SOPS from 0 (absent) to 6 (extreme)**

0 Absent	1 Questionably present	2 Mild	3 Moderate	4 Moderately severe	5 Severe	6 Extreme
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#### 4.3.3. Symptom onset, worsening and frequency

Following each *Rating rationale* section, a rating box is shown. For positive symptoms the box has four parts; for other symptoms – one part. For positive symptoms rated at a level 3 or higher, under *Symptom Onset* the rater should record the date when the earliest symptom first occurred in the range 3–6. Under *Symptom Worsening*, they are to record the most recent date when the symptom increased in severity by one point. *Symptom Frequency* part requires checking the boxes that map onto the COPS criteria. For Negative, Disorganized and General Symptoms, an abbreviated symptom onset box is listed.

Under *Better Explained*, the interviewer also has to rate for positive symptoms whether the symptom is better explained by another DSM psychiatric, medical, or substance disorder or by medication side effects. There are two tests. The first test is temporal sequence. If the positive symptoms were present before onset of the

co-occurring disorder or persist when the co-occurring diagnosis is in remission, the option to choose is 'NOT better explained'. If the co-occurring diagnosis has been present continuously during the period of positive symptoms, the second test is applied. The second test is whether the positive symptoms are more characteristic of a psychosis-risk syndrome or of the co-occurring disorder. When the positive symptoms are more characteristic of the other disorder, the symptoms are considered better explained by the other disorder. For example: feeling of personal disintegration precipitated by stress and relieved by self-injury in a borderline patient is better explained by the personality disorder. The sole exception is for schizotypal personality disorder: positive symptoms that are worsening are always rated as not better explained by SPD.

Table 4. Rating box for positive symptoms rated at a level 3 or higher

For symptoms rated at level 3 or higher			
Symptom Onset	Symptom Worsening	Symptom Frequency	Better Explained
Record date when a positive symptom first reached at least a 3: <input type="checkbox"/> 'Ever since I can recall' <input type="checkbox"/> Date of onset ___/___ Month/Year	Record most recent date when a positive symptom currently rated 3–6 experienced an increase by at least one rating point: Date of worsening ___/___ Month/Year	Check all that apply: <input type="checkbox"/> $\geq 1\text{h/d}$ , $\geq 4\text{d/wk}$ <input type="checkbox"/> $\geq$ several minutes/d, $\geq 1\text{x/mo}$ <input type="checkbox"/> $\geq 1\text{x/wk}$ <input type="checkbox"/> none of above	Symptoms are better explained by another DSM disorder. Check one: <input type="checkbox"/> Likely <input type="checkbox"/> Not likely

## 5. Psychometric properties of the SIPS

The subject of this paper is the description of the Polish translation of the tool, which is currently undergoing a full validation procedure. The following psychometric properties relate to the original version of the SIPS and its several versions developed in other countries.

Pilot studies – of both the original SIPS and its various translations – indicate the tool's good predictive validity and satisfactory level of most of the basic psychometric measures. Their results were somewhat different, though, owing to different sample characteristics and sizes.

SIPS authors [13], in longitudinal studies on groups of 14 and 49 patients, showed good predictive validity of the tool – in 40–50% of patients that fulfilled the POPS criteria a full-blown psychosis developed over the next 12 months. Still, other reports based on analyses of data from a much larger number of participants (several hundred) indicate that the possibility of developing the illness was 10 to 20% [7, 9, 14, 15]. Efforts have also been made to determine convergent validity of the SIPS by analyzing correlations between the values of the scale factors and severity of symp-

toms according to the *Positive and Negative Syndrome Scale* (PANSS). The resulting high, statistically significant correlation coefficients between the two scale measures exceeded the value of 0.70 [16].

In validation studies attempting to determine the tool's reliability with the Cronbach's alpha carried out in other countries, the overall score was very satisfactory ( $\alpha > 0.8$ ), with lower scores of the subscales measuring individual groups of symptoms [16, 17]. A study of the Spanish version of the SIPS on a group of 30 UHR patients aged 15 to 31 years ( $M = 21.70$ ) showed satisfactory reliability of the negative symptom ( $\alpha = 0.875$ ) and disorganization scales ( $\alpha = 0.711$ ), but low reliability of the positive symptom ( $\alpha = 0.539$ ) and general symptom scales ( $\alpha = 0.574$ ) [18]. In a Korean study [16] on a group of 40 UHR patients aged 15–33 years ( $M = 21.33$ ), only the Negative Symptom Scale reached acceptable reliability ( $\alpha = 0.78$ ), while the scores of the Positive Symptom, General Symptom and Disorganization scales were 0.50; 0.56; and 0.48, respectively.

Due to the methodology applied in these studies, the reduced reliability scores of individual subscales should not lead to conclusions of poor measurement accuracy of the SOPS subscales, among other things, due to the different language versions. These studies were conducted on small groups, which makes it difficult to capture a representative variation, particularly in the case of the short scales. It is worth noting that in both studies, the only scale reaching satisfactory reliability was the longest, negative symptom scale, which is the only one consisting of 6 items.

The reliability of the SOPS was also tested using competent judges as the assessment method. Concordance coefficient for the overall score was estimated at 0.95 to 0.96, and for each subscale (positive, negative and general symptoms) it ranged from 0.75 to 0.80 [13, 16].

The subject of a part of the studies was theoretical validity of the SOPS determined by means of principal components factor analysis. In all the works of this type, they revealed the distribution of loadings in three, not four, factors – negative, general and positive symptoms. The resulting structures differed in terms of rotation method, the composition of the scales (3 to 9 items) and their reliability (from  $< 0.5$  in the shortest scales of general symptoms to  $> 0.8$  in the longest scales of negative symptoms) [14, 16, 18, 19]. In such an advanced method as principal components analysis, the sample size has a significant impact on the reliability scores. It is recommended that the optimum size of the sample to be analyzed is 5–10 persons per one item, and the minimum should be not less than three persons per one item [20]. The above studies were conducted on small (30 to 95), or mixed samples, comprising both UHR patients and those meeting the criteria for other disorders, including schizophrenia and mood disorders. With 19 items of the SOPS, most studies did not reach the minimum (and none of them optimal) sample size allowing to achieve fully reliable results of factor analysis. As suggested by the described data, the recruitment of UHR patients is difficult and therefore it is worth conducting validation studies in multicenter collaboration. [21]

## 6. Polish version of the SIPS

In May 2017, we electronically contacted the authors of the SIPS [13]. Having obtained their consent to undertake research on the Polish validation of the tool, we commenced the translation process involving two independent translators. In the first step, the content of the interview was translated from English into Polish, upon which the second translator conducted translation from Polish into English. Thus obtained back translation was sent to the authors of the SIPS in August 2017 to verify its correctness. Validity assessment of the translation and proofreading lasted until October 2017, and the final approval of the Polish translation was received on the 12.10.2017. The pilot study of the Polish version of the SIPS that will determine its psychometric properties is still in progress.

## 7. Conclusions

Among persons seeking help at mental health clinics there are those who cannot be diagnosed with any particular mental illness or personality disorder based on standard diagnostic criteria. As described in this paper, the SIPS can constitute a useful tool for identification of persons from psychosis high-risk groups. Based on elevated SIPS scores and clinical assessment it is possible to determine the severity of psychopathological symptoms which do not meet criteria for mental illness/disorder and implement early intervention, e.g., cognitive behavioral psychotherapy (CBT), which can prevent conversion to full-blown psychosis or any other disorder. The Polish adaptation of the SIPS is currently underway, including tests on its reliability and validity, and there are parallel works on a treatment program for persons at high risk of developing psychosis.

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## References

1. Samochowiec J, Bieńkowski P. *Diagnoza, leczenie, organizacja. Wybrane wytyczne Europejskiego Towarzystwa Psychiatrycznego (EPA)*. Krakow: Polish Psychiatric Association Editorial/Publishing Committee; 2016.
2. Jarema M. *Standardy leczenia farmakologicznego niektórych zaburzeń psychicznych*. VM Media Sp. z o.o. VM Group sp. k. (Grupa Via Medica); 2015.

3. Huber G. *Reine Defektsyndrome und Basis-Stadien endogener Psychosen*. Fortschr. Neurol. Psychiatr. 1966; 34: 409–426.
4. Janzarik W. *Schizophrene Verlaufe*. Berlin–Heidelberg–New York: Springer; 1968.
5. Rabe-Jabłońska J, Kotlicka-Antczak M. *Ryzykowny stan psychiczny. Czy można zapobiegać schizofrenii?* Poznań: Termedia Wydawnictwa Medyczne; 2012.
6. Young AR, McGorry PD. *The prodromal phase of first-episode psychosis: Past and current conceptualizations*. Schizophr. Bull. 1996; 22(2): 353–370.
7. Woods SW, Addington J, Cadenhead KS, Cannon TD, Cornblatt BA, Heinsen R et al. *Validity of the prodromal risk syndrome for first psychosis: Findings from the North American Prodrome Longitudinal Study*. Schizophr. Bull. 2009; 35(5): 894–908.
8. Klosterkötter J, Hellmich M, Steinmeyer EM, Schultze-Lutter F. *Diagnosing schizophrenia in the initial prodromal phase*. Arch. Gen. Psychiatry 2001; 58(2): 158–164.
9. Cannon TD, Cadenhead K, Cornblatt B, Woods SW, Addington J, Walker E et al. *Prediction of psychosis in youth at high clinical risk: A multisite longitudinal study in North America*. Arch. Gen. Psychiatry 2008; 65(1): 28–37.
10. Morrison AP, French P, Walford L, Lewis SW, Kilcommons A, Green J et al. *Cognitive therapy for the prevention of psychosis in people at ultra-high risk: Randomised controlled trials*. Br. J. Psychiatry 2004; 185: 291–297.
11. Gross G, Huber G, Klosterkötter J, Linz M. *Bonner Skala für die Beurteilung von Basissymptomen (BSABS)*. Berlin: Springer; 1987.
12. Jaracz J, Grzechowiak M, Raczkowski L, Rataj K, Rybakowski J. *Polska wersja Kompleksowej Oceny Zagrożających Stanów Psychiczych (CAARMS) – opis metody*. Psychiatr. Pol. 2012; 46(1): 95–107.
13. Miller TJ, McGlashan TH, Rosen JL, Cadenhead K, Cannon T, Ventura J et al. *Prodromal assessment with the structured interview for prodromal syndromes and the scale of prodromal symptoms: Predictive validity, interrater reliability, and training to reliability*. Schizophr. Bull. 2003; 29(4): 703–715.
14. Lemos-Giráldez S, Vallina-Fernández O, Fernández-Iglesias P, Vallejo-Seco G, Fonseca-Pedrero E, Paño-Piñeiro M et al. *Symptomatic and functional outcome in youth at ultra-high risk for psychosis: A longitudinal study*. Schizophr. Res. 2009; 115(2): 121–129.
15. Yung AR, Yuen HP, Berger G, Francey S, Hung TC, Nelson B et al. *Declining transition rate in ultra high risk (prodromal) services: Dilution or reduction of risk?* Schizophr. Bull. 2007; 33(3): 673–681.
16. Jung MH, Jang JH, Kang DH, Choi JS, Shin NY, Kim HS et al. *The reliability and validity of the Korean version of the structured interview for prodromal syndrome*. Psychiatry Investig. 2010; 7(4): 257–263.
17. Fernández P, Ortega J, García P, Gutiérrez A, García A, Bobes J et al. *Predictive validity of the Scale of Prodromal Symptoms (SOPS)*. Actas Esp. Psiquiatr. 2006; 34(4): 216–223.
18. Hawkins KA, McGlashan TH, Quinlan D, Miller TJ, Perkins DO, Zipursky RB et al. *Factorial structure of the Scale of Prodromal Symptoms*. Schizophr. Res. 2004; 68(2): 339–347.
19. Comparelli A, Savoia V, Kotzalidis GD, Woods SW, Masticoni S, Vassallo F et al. *Factor-structure of the Italian version of the Scale of Prodromal Symptoms (SOPS): A comparison with English version*. Epidemiol. Psychiatr. Sci. 2011; 20(1): 45–54.

20. MacCallum RC, Widaman KF, Zhang S, Hong S. *Sample size in factor analysis*. Psychological Methods 1999; 4(1): 84–99.
21. Preti A, Cella M. *Randomized-controlled trials in people at ultra high risk of psychosis: A review of treatment effectiveness*. Schizophr. Res. 2010; 123(1): 30–36.

Address: Monika Mak  
Department of Psychiatry  
Pomeranian Medical University  
70-001 Szczecin, Broniewskiego Street 26  
e-mail: monika.mak@gmail.com