

## SPWPP0-2 – Developing scale of attitudes toward internet psychological support

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### Abstract

**Aim of the study:** The interest in remote psychological services is currently increasing. Changing the way psychological help is provided requires considering new issues, including patients' attitudes toward this form of help. The aim of the study was to construct and determine the psychometric properties of a tool for assessing attitudes toward psychological help provided via the Internet among healthy and clinical group.

**Subject or material and methods:** 154 items were selected from the original pool of 330 items. A pilot study was carried out on a group of 100 students (60% females,  $M_{Age} = 23.3$ ). The final version of the tool included 43 items whose discriminant power is higher than 0.5. Cronbach's  $\alpha$  for the final version of the tool was .975. 10 scales were distinguished and a reliability test ( $\alpha = .966$ ) was carried out on 100 healthy people.

**Results:** As a result of a factor analysis performed on the data obtained from a study of healthy people ( $N = 100$ ; 74% females;  $M_{Age} = 29.5$ ) and clinical group ( $N = 466$ ; 54% females;  $M_{Age} = 40.6$ ), a final three-factor structure of the tool with appropriate reliability and differential validity was obtained.

**Discussion:** The final version of the SPWPP0-2 questionnaire consists of 43 items. A tool that meets the criteria of psychometric goodness was obtained. It can be used in research on general and clinical populations and also in practice.

**Conclusions:** The tool is useful in research and clinical areas. It can be used by mental health professionals to assess attitudes toward online psychological support for patients and potential patients.

**Attitude Scale; Online Help; Psychological Assistance; Attitude Measurement; Psychometric Value**

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### 1. INTRODUCTION

Modern human activity has been modified by the Internet [1]. One of the effects of the widespread use of the Internet is the possibility for people to communicate in real-time, even when the people involved in the communication process are very distant from each other [2].

The Internet has also found its application in the process of psychological assistance. This

form of help should be understood as providing help by a psychologist or psychotherapist via the Internet [3].

In connection with the pandemic caused by the spread of the SARS-CoV-2 virus and the changes that have occurred in the possibilities of inpatient mental health care, the Polish Psychiatric Association [4] has published recommendation on how to conduct online visits for patients. Detailed recommendations for online visits during the epidemic crisis were also presented by the Telepsychiatry Section [5]. Significant Polish psychological organizations, such as the Polish Psychological Society and the Polish Society of Clinical Psychology, have not yet issued recommendations related to online methods of providing psychological assistance. It is worth emphasizing that providing psychological assistance using remote means of communication has been recommended in many countries [6].

### 1.1. Psychological assistance

The concept of psychological assistance can be understood in different ways. The world literature and Polish literature show certain differences both in terms of nomenclature and the definition of selected activities undertaken by specialists dealing with forms of psychological assistance. In English, the term “psychological help” is not properly defined. The specific, defined terms are psychological assessment, psychological counseling, psychological treatment, and psychotherapy / talk therapy. Based on the Polish literature, it can be assumed that psychological assistance should be understood as “a type of activity or as a type of social interaction or social relationship of a professional nature” [7; p. 161]. Psychological assistance includes such areas of professional activities of a clinical psychologist as: health promotion and psychoeducation, pathology prevention, assistance in resolving traumatic and crisis situations (crisis intervention), assistance in solving developmental crises (psychological counseling) and assistance in reducing and eliminating disorders (psychotherapy, resocialization and rehabilitation) [8].

### 1.2. Online psychological assistance

Online psychological assistance can take two forms: synchronous, e.g. provided via chat or Skype, and asynchronous, i.e. via e-mail, a forum [9,10]. In synchronous forms of communication, both the client and the helper are at the computer at the same time and conduct a written or voice conversation. Asynchronous ones do not require the presence of both people at the computer at the same time, and questions and answers are sent at any given time [11]. There are also several types of psychological assistance provided via the Internet. Most often, these forms of assistance are the same as those provided during an in-person meeting.

Both people with a mental illness and healthy people can use online psychological assistance. Online psychological assistance may cover the sphere of personal, family or social functioning of the person using it. Research on online psychological assistance is related to many aspects, as stress management training [12], group and individual psychotherapy [13, 14] or substances use therapy [15].

### 1.3. Attitudes toward online psychological assistance

The term “attitude” was introduced by Thomas and Znaniecki [16] to describe the processes of individual consciousness that determine both the current and supposed reactions of each person to the social world. An attitude is always an attitude toward some value, and they consider “any fact having an empirical content available to members of a specific social group and a meaning according to which it is or can be an object of action” to be a value [16]. Mika [17] indicates that an attitude can be understood as a relatively permanent structure (or a disposition for the appearance of such a structure) of cognitive, emotional and behavioral processes, in which a specific attitude toward a given object is expressed. Thus, the attitude, combining emotional, motivational and cognitive elements, allows to more precisely reflect the entire organization of the mental life of an individual in terms of their attitude to reality. It is a persistent positive or negative evaluation of

people, objects, and concepts [18]. As a consequence, the attitude toward online psychological assistance is understood by the authors of this article as “a relatively stable tendency to a positive or negative evaluation of this type of assistance, irrespective of whether this attitude takes the form of beliefs, feelings or behavioural tendencies” [3].

#### 1.4. Present study

The main objective of the study was to construct the Scale of Attitudes Towards Psychological Support On-line – 2 (SPWPPO-2), intended for both healthy people and those with mental disorders and illnesses, whose use or want to use help by Internet. Currently, there is no tool to measure this characteristic in Poland. In practice, determining the patient’s/client’s attitude to treatment is an extremely important factor determining how professionals provide assistance.

The researchers set themselves the following specific goals: (1) developing an experimental version of the tool; (2) conducting a pilot study and determining the statistical properties of the test items, and (3) constructing a final, accurate and reliable version of SPWPPO-2.

## 2. METHODS

For the purpose of constructing the Scale of Attitudes Towards Psychological Support On-line – 2 (SPWPPO-2), a proprietary sociodemographic questionnaire was used, which allowed for the collection of data on age, gender, place of residence and experiences related to using online psychological assistance (also about the reasons for using or not using this type of aid) as well as the mental health of the respondents. The research under the project was conducted among randomly selected Caucasian adults living in Poland. The research was conducted anonymously and voluntarily, with the informed consent of each participant.

The Online Scale of Attitudes Towards Psychological Support On-line – 2 (SPWPPO-2) was created in a few steps.

The first step in creating the SPWPPO-2 scale, in line with psychometric procedures, was to de-

fine the purpose of the measurement. The second step was the operationalization of the studied variable, which is the attitude toward online psychological help. Indicators were established – the researchers agreed that the attitude should be expressed either through the emotional attitude, behavior or expressed views of the subjects toward online psychological help. Next, the scaling method was selected. The items were closed and were in the Likert scale format [19]. Some items asked directly about the attitude to psychological help online, and some were in the form of so-called inverted positions. The total score on the scale is obtained by summing the scores for the individual items.

Before generating the items, the table of specifications was built – the number of items in each content area was determined. The content areas were as follows: (I) type of attitude: positive and negative [18]; (II) type of help communication: synchronous and asynchronous [9,10]; (III) type of help provided: crisis intervention, psychological consultation, psychotherapy and psychoeducation [3]; and (IV) type of problem that people using online help want to cope with: mental disorders, mental illness, or life difficulties [12, 20]. The original pool of items included all content combinations.

The items were generated by authors of the article with assistants. The test items were created in such a way as to refer to the beliefs, feelings and behaviors [18] of the respondents in relation to online psychological assistance and thus to describe the whole attitude toward this help. On this basis, 330 items were generated, which represented each area equally. Then the content accuracy of the items was examined.

The items were analyzed in terms of content validity in accordance with the Inter-Rater Agreement Model for Content Validity [21, 22]. Judges / experts determined whether individual items were within the scope of the content universe and whether they were representative of this universe. Three experts in the studied field assessed the items for compliance with the definition of the measured feature. This made it possible to remove test items that were found to be inconsistent with the used definition of the measured feature. The measure of compliance of the judges / experts was Lawshe’s Content Validity Ratio. A positive, close to 1, Lawshe con-

tent relevance factor (CVR) was obtained for all items selected at this stage.

After the content analysis of the competent judges and the linguistic correctness analysis of the statements, 154 items were included in the questionnaire intended for the pilot study.

The draft questionnaire was completed by 100 people (60 females) aged 19 to 28 (mean age  $M = 23.3$ ) to assess the reliability of the scale and the strength of the items (pilot study). Due to the type of the created tool, the study was of the paper-pencil type. It was conducted among students at the Academy of Physical Education in Gorzów Wielkopolski (in Poland). The students did not report difficulties in understanding the test items, nor did they ask questions about how to mark the answers. All participants who underwent the study completed the study in a similar amount of time (45 minutes).

On this basis, 43 items with the highest discriminative power and reliability were selected to maintain an appropriate number of items representing the specified content areas.

A study was conducted to analyze the factor structure of the resulting scale. The re-study included 100 people aged 19 to 68 ( $M = 29.5$ ;  $SD = 10.2$ ), 74 females and 26 males with vocational (3%), secondary (43%) and higher (54%) education. The selection for the sample was random. The majority (94%) did not use any form of remote assistance in the period before the survey. People who declared mental illnesses were excluded from this part of the study – mental health was the criterion for inclusion in the study group. The test was again carried out using the paper-pencil method. The subjects were recruited through an announcement posted on social media about the incentive to participate in the study – the purpose of the study was public.

In the next step, people with a psychiatric diagnosis and a healthy population were examined with the questionnaire. 100 healthy people and 366 psychiatric patients aged 18 to 74 ( $M = 40.63$ ;  $SD = 14.6$ ) participated in this study. 54% of the group were females, 46 people had primary or lower secondary education (13%), 55 people had vocational education (15%), 166 had secondary education (45%), and 98 people had higher education (27%). One person did not indicate their level of education. The study was conducted at the Department and Clinic of Psy-

chiatry of the Pomeranian Medical University in Szczecin (Poland) among hospitalized persons, and through Google Forms by Google LLC to study the healthy population. The link leading to the questionnaire was distributed using social media. The respondents received information about the voluntary participation in the study and the principles of anonymity. The participants of the study were informed about the purpose of the study and each participant agreed to participate in the study. The majority (88%) did not use any form of remote assistance in the period before the survey.

Further, a factor analysis was performed using the data from the research of both groups with the final version of the questionnaire (groups of healthy people and groups of people with mental disorders or diseases). Both groups were compared in terms of the results to verify the validity of the tool.

The IBM SPSS Statistics 28 and Jamovi programs were used for statistical data analysis. The following steps were performed:

- (1) analysis of the degree of compliance of the competent judges, which was estimated using the Lawshe CVR coefficient.
- (2) assessment of the reliability of the scales – estimated using the Cronbach's alpha and McDonald's omega coefficients, assuming the level of 0.7 as satisfactory. The discriminant power of the test items was calculated using the item-scale correlation coefficient.
- (3) theoretical validity analysis – determined based on an EFA and a CFA. The criteria of Hu and Bentler [21] were adopted as goodness-of-fit indicators:  $RMSEA < 0.08$ ;  $SRMR < 0.08$ ;  $CFI > 0.09$ ;  $CMIN / DF < 5$ .
- (4) EFA – carried out using the maximum likelihood method with oblimin rotation. The optimal number of factors in the EFA was estimated based on Kaiser, Cattell and Horne's parallel analysis. 0.4 was assumed as the minimum load value [22].
- (5) differential validity analysis – estimated using HTMT with the threshold value of 0.8.

## 2.1. Ethical considerations

Each person taking part in the study gave informed consent to participate in the study. Pri-

or to the start of the study, a member of the research team provided full information to the subjects, informed them of the possibility of opting out of the study at any time, how the data would be collected and processed, and how it would be anonymized. The respondents had the opportunity to ask questions and receive satisfactory answers. During the survey conducted online, the respondents were informed in writing to the identical extent and had the opportunity to contact the team to ask questions. In addition, the authors received approval from the Bioethics Committee of the Institute of Psychology, University of Szczecin to conduct the present study. During the course of this study, the researchers were guided by the Declaration of Helsinki and the data processing rules in effect in Poland.

### 3. RESULTS

#### 3.1. First study – pilot study

The pilot study was aimed at assessing the quality of the test items (discriminant power, etc.), while the entire structure of the tool was verified at a later stage. Based on the pilot study, the reliability of the entire questionnaire was calculated and a strong result of  $\alpha = 0.985$  was obtained. However, it was decided to choose only the best items. The item-rest correlation criterion

was assumed to be more than 0.5. Then, out of 154 items with high discriminant power, 43 were selected in such a way as to maintain a similar number of diagnostic items and inverted items in the individual subscales. In the thus created version of the questionnaire, the average answer to the items was  $M = 2.57$ ,  $SD = 0.747$ . The reliability of the final version of SPWPPO-2 with a significant reduction in the number of questions, expressed by the Cronbach's  $\alpha$  coefficient, was 0.975.

The questionnaire addresses several different content areas, as previously mentioned. Therefore, ten scales have been distinguished, which include three thematic groups:

- (I) scales used in the questionnaire regarding the forms of providing online help;
- (II) scales used in the questionnaire regarding the type of psychological assistance provided via the Internet;
- (III) scales used in the questionnaire regarding the problem that the person reports for online psychological assistance;

The questions in SPWPPO-2 relate to only one of the areas within a group, but often cover several groups, so they belong to more than one group at a time.

Using the above structure of the tool, a reliability analysis was carried out for the individual scales (Table 1).

**Table 1.** Reliability Cronbach's  $\alpha$  and McDonald's  $\omega$  coefficients of individual test scales.

	Type of problem			Type of method			Type of communicator		
	Illness	Disorder	Hardships	Psycho therapy	Psycho education	Crisis	Chat	E-mail	Skype
Cronbach's $\alpha$	0.769	0.807	0.858	0.822	0.785	0.806	0.866	0.820	0.803
McDonald's $\omega$	0.781	0.816	0.861	0.834	0.795	0.812	0.870	0.826	0.814

#### 3.2. Second study – psychometric verification of the tool

After the final version of the questionnaire was created, a study was conducted to verify the reliability and factor structure of the questionnaire.

The re-study included 100 people from all over Poland aged 19 to 68 ( $M = 29.5$ ;  $SD = 10.2$ ). The reliability of the questionnaire in this group was also high – the Cronbach's Alpha internal consistency index was  $\alpha = .966$ . The items concerned the content from different subgroups (Table 2).

**Table 2.** Scale descriptives.

	CHAT	SKYPE	E-MAIL	PSYCHO-THERAPY	PSYCHO-EDUCATION	CRISIS	GUIDANCE	ILLNESS	DISORDER	HARDSHIPS
N	100	99	99	100	99	100	99	100	99	99
Mean	39.1	36.5	36.2	43.6	30.3	28.2	29.1	25.8	40.0	45.5
Median	39.0	37.0	36.0	44.5	30.0	28.5	29.0	27.0	39.0	46.0
Std. deviation	4.33	4.20	6.81	9.55	4.12	7.74	3.30	6.86	6.43	6.81
Minimum	27.0	22.0	19.0	22.0	19.0	12.0	22.0	10.0	24.0	26.0
Maximum	48.0	46.0	53.0	61.0	40.0	46.0	39.0	39.0	58.0	61.0
Skewness	0.030	-0.605	0.034	-0.238	-0.112	-0.069	0.330	-0.003	0.253	-0.369
Std. error skewness	0.241	0.243	0.243	0.241	0.243	0.241	0.243	0.241	0.243	0.243
Kurtosis	-0.290	1.290	-0.048	-0.857	-0.073	-0.482	0.543	-0.817	-0.147	-0.007
Std. error kurtosis	0.478	0.481	0.481	0.478	0.481	0.478	0.481	0.478	0.481	0.481

To verify whether the distribution of the respondents' answers corresponds to the assumed structure, a confirmatory factor analysis was carried out using the Jamovi program. Standardized estimate P6 "In a situation of marital conflict, you should not ask a psychologist for e-mail advice" in the scale of attitudes toward online psychological assistance provided by e-mail was 0.395, and P15 (excluded in a further step) "I am irritated by the increase in popularity of online psychological consultations" in the scale of attitudes toward psychological counseling conducted online was negative. The reverse statistical system of item P15 may result from the inexperience of using the forms of help by the respondents, and the emotional component of the attitude is particularly active when the statement concerns the respondents. This effect may not have occurred here. It is worth noting that

the remaining items had an appropriate level of the coefficient – above 0.4. Due to the limited size of the manuscript, the authors have not included tables with detailed results of the confirmatory analysis. Interested readers are invited to contact them by email.

The conducted analyses aimed at determining the fit of the model to the data (Table 3) did not provide satisfactory results. Only The Standardized Root Mean Square Residuals (SRMR) index obtained satisfactory results of approx. 0.08 for all three divisions. The remaining indicators revealed that the best-suited division is based on the type of problem of the user. In the system of subscales assumed by the authors, however, there is a mutual overlapping of the three individual dimensions. The items refer to more than one division at the same time, therefore it is difficult to fully separate the subscales.

**Table 3.** Model fit to data coefficients.

	Test for Exact Fit			Fit Measures					
	$\chi^2$	df	P	CFI	TLI	SRMR	RMSEA	RMSEA 90% CI	
								Lower	Upper
Communicator	1493	626	<0.001	0.695	0.676	0.080	0.118	0.11	0.125
Type of method	2081	854	<0.001	0.654	0.634	0.080	0.12	0.113	0.126
Type of problem	1479	626	<0.001	0.702	0.683	0.081	0.117	0.109	0.124

The structure of the tool was not confirmed – the models in each version were mismatched. This means that the adopted structure was not mapped in the data. Therefore, it was necessary to re-verify the structure by exploratory factor analysis.

The structure was verified on data obtained from studies conducted on a larger and more diverse group of people – both healthy people (N = 100) and people with mental disorders or diseases (N = 366). The age in the group of people with disorders ranged from 18 to 74 years (M = 40.63; SD = 14.6), and 54% of the group were females.

To determine the structure of the questionnaire, a maximum likelihood factor analysis with oblimin rotation was performed. The KMO value was 0.875, and the Bartlett sphericity test was found to be statistically significant ( $\chi^2 = 3723$ ;  $df = 903$ ;  $P < .001$ ), which confirms the validity of the factor analysis. Based on the Kaiser criterion, the analysis identified 3 factors. Horne's parallel analysis identified 5 factors, and this solution included a factor with two items. Therefore, a 3-factor solution was adopted for further analyses. Four questions (P15, P33, P40, and P41) with factor loadings below 0.4 were excluded from the analyses [19]. The values of the factor loadings are presented in Table 4.

**Table 4.** Matrix of factor loadings.

	Factor 1	Factor 2	Factor 3
P1	0.612		
P2	0.544		
P3	0.647		
P4	0.659		
P5	0.572		
P6			0.402
P7			0.485
P8	0.499		
P9	0.568		
P10			0.528
P11	0.690		
P12		0.451	
P13	0.503		
P14	0.689		
P16			0.535
P17	0.670		
P18	0.690		
P19	0.770		
P20	0.667		
P21		0.464	
P22	0.664		
P23		0.646	
P24		0.574	
P25		0.580	
P26	0.621		
P27		0.583	

P28	0.603		
P29		0.503	
P30		0.720	
P31		0.715	
P32		0.676	
P34		0.593	
P35	0.523		
P36		0.783	
P37		0.709	
P38	0.666		
P39	0.653		
P42	0.451		
P43		0.586	
SS			
	8.47	6.47	2.43
% Variance			
	19.69	15.04	5.66

The reliability of the factors was calculated using Cronbach's  $\alpha$  and McDonald's  $\omega$ . The analysis showed that all factors were characterized by a satisfactory level of reliability (Table 5).

**Table 5.** Reliability coefficients for factors.

	Factor 1	Factor 2	Factor 3
Cronbach's $\alpha$	0.929	0.912	0.714
McDonald's $\omega$	0.930	0.912	0.718

To estimate the differential validity, an HTMT analysis was performed. All the values were less than 0.8, which means that the differential validity was confirmed. The factors are interrelated but weakly enough that they constitute separate constructs (Table 6).

**Table 6.** HTMT analysis.

	1	2	3
Factor 1	-	0.353	0.661
Factor 2		-	0.261
Factor 3			-

To compare two groups – a group of healthy people and a group of people with mental disorders or diseases – in terms of the analyzed factors, the t-test analysis was performed for independent samples. The analysis showed significant differences between the groups for factors 2 and 3 – for factor 2, higher results were obtained in the group with disorders, and for factor 3, in the healthy group. The strength of the effect for the differences was weak (Table 7).

**Table 7.** Comparison of healthy people and mental disorders in terms of factors.

	Healthy persons (n = 100)		Disordered persons (n = 366)		t	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Factor 1	60.81	18.12	63.12	15.64	-1.16	0.247	-6.24	1.62	0.14
Factor 2	37.12	13.32	42.22	11.20	-3.51	0.001	-7.98	-2.23	0.44
Factor 3	12.98	3.34	11.95	3.45	2.66	0.008	0.27	1.79	0.30



### 3.3. Characteristics of the study group in the final structure of the tool

In order to compare the results of the questionnaire due to sociodemographic variables, either a t-test analysis for independent samples or the Mann Whitney U test was performed for the comparison of two groups, while Spearman correlation analysis was performed to determine the relationship between the factors and age, place of residence and education.

#### 3.3.1. Healthy group

The analysis showed no gender differences for the questionnaire results (Table 8). There were no relationships between the questionnaire results and age, place of residence and level of education (Table 9). There were also no differences in scores due to online therapy experience (Table 10).

**Table 8.** Comparison of men and women in terms of questionnaire results – healthy group.

	Female (n = 74)			Male (n = 26)			Z	P	r
	Average rank	Mdn	IQR	Average rank	Mdn	IQR			
Factor 1	51.61	60.50	23.25	47.35	61.00	34.75	-0.65	0.519	0.06
Factor 2	51.2	37.50	18.75	46.73	33.50	20.25	-0.77	0.441	0.08
Factor 3	51.50	13.00	4.00	47.65	13.00	5.25	-0.59	0.559	0.06

**Table 9.** Spearman correlations between questionnaire scores and age, place of residence and education – health group.

	Factor 1		Factor 2		Factor 3	
	rs	P	rs	P	rs	P
Age	0.02	0.846	0.05	0.604	-0.02	0.816
Place of residence	-0.09	0.389	-0.02	0.822	-0.01	0.931
Education	0.01	0.900	0.08	0.439	0.06	0.532

**Table 10.** Comparison of people with and without online therapy experience in terms of questionnaire results – healthy group.

	Online therapy experience						Z	P	r
	Yes (n = 6)			No (n = 94)					
	Average rank	Mdn	IQR	Average rank	Mdn	IQR			
Factor 1	55.67	68.00	20.25	50.17	60.00	28.25	-0.45	0.653	0.05
Factor 2	61.75	43.50	15.25	49.78	35.00	22.00	-0.98	0.327	0.10
Factor 3	44.08	12.50	5.75	50.91	13.00	4.00	-0.56	0.574	0.06

#### 3.3.2. The group with disorders

The analysis showed no gender differences for the questionnaire results (Table 11). There were no correlations between the questionnaire results and place of residence or level of education, while the correlation between Factor 1 and level of education was significant (Table 12). The

correlation was weak and negative, meaning that the higher the level of education one had, the lower the scores obtained for factor 1. There were also no differences in scores based on one's experience in online therapy for factors 2 and 3, while higher scores were obtained for factor 1 in those who had experience in therapy (Table 13).

**Table 11.** Comparison of men and women in terms of questionnaire results – disorder group.

	Female (n = 198)		Male (n = 167)		t	df	P	95% CI		Cohen's d
	M	SD	M	SD				LL	UL	
Factor 1	63.35	14.94	62.90	16.50	0.28	363	0.782	-2.78	3.69	0.03

Factor 2	41.91	11.25	42.57	11.20	-0.56	363	0.576	-2.98	1.66	0.06
Factor 3	12.02	3.49	11.87	3.42	0.39	363	0.698	-0.57	0.86	0.04

**Table 12.** Spearman correlations between questionnaire scores and age, place of residence and education – disorder group.

	Factor 1		Factor 2		Factor 3	
	$r_s$	P	$r_s$	P	$r_s$	P
Age	0.05	0.371	0.04	0.471	-0.05	0.343
Place of residence	-0.02	0.47	-0.03	0.548	0.03	0.549
Education	-0.12	0.026	-0.04	0.428	0.04	0.452

**Table 13.** Comparison of individuals with and without online therapy experience in terms of questionnaire results – disorder group.

	Yes (n = 44)			No (n = 322)			Z	P	r
	Average rank	Mdn	IQR	Average rank	Mdn	IQR			
Factor 1	214.09	65.50	27.25	179.32	63.00	19.00	-2.05	0.041	0.11
Factor 2	182.90	42.00	13.50	183.58	42.00	13.00	-0.04	0.968	<0.01
Factor 3	181.36	12.00	7.00	183.79	12.00	4.00	-0.14	0.886	<0.01

#### 4. DISCUSSION

The aim of this study was to construct and determine the psychometric properties of a tool designed to measure attitudes toward psychological assistance provided online. As a result of the conducted psychometric analyses, it was shown that the questionnaire has an acceptable level of reliability and validity.

The final version of the SPWPPO-2 questionnaire consists of 43 items (with very high discriminatory power) that the respondents answer on a 5-point Likert scale. On the first page of the questionnaire, there are short definitions of the types of online communication in order to control the variable related to the greater or lesser knowledge of the Internet by the respondents. Interestingly, even though most of the people in this study completed the questionnaire to the end and had no questions or doubts while completing it, after the study, they declared that filling it in was a new, difficult experience for them. After analyzing this situation, it was determined that they found it difficult to distinguish between forms of psychological assistance. They declared that, without using psychological assistance, they had never thought about their type or functions, which may be a limitation of this study. On the other hand, each tested person de-

finied their attitude toward online psychological assistance in an identically intuitive way, so the test was not biased for any subgroup of respondents (e.g. due to age or education).

When calculating the general score, which shows the attitude of the respondent toward online psychological help, the points obtained by them in the individual items of the questionnaire should be summed up. In twenty-one items, reverse scoring should be used (items numbered 6, 7, 10, 12, 15, 16, 21, 23, 24, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 41, and 43). Ultimately, the higher the overall score in SPWPPO-2, the more positive the respondent is about online psychological help.

It is worth noting that as many as 287 items were removed from the original pool, which had fairly strong, but not high, discriminatory power. The strength of the items attached to the questionnaire was the inclusion of content areas important from the point of view of theoretical assumptions, clinical practice, and the specificity of Internet communication.

In the primary structure of SPWPPO-2, within ten interdependent subscales, there are items that refer to more than one content division at the same time. This probably explains why the performed statistical analyses did not obtain satisfactory results of fitting the model to the data.

As a result of the factor analysis, a three-factor structure of the tool was obtained. When analyzing the content of individual items of the questionnaire, it can be seen that the first factor consists of items concerning both synchronous and asynchronous online psychological help used for psychoeducation, life crisis resolution or support. Factor 2 included items focused on the synchronous help provided to conduct psychotherapy or to provide support for people with mental disorders. The third factor contained only four questionnaire items that described asynchronous communication to conduct consultations or crisis intervention by a specialist. The reliability of the identified factors was sufficient. The authors of the article are planning the next stage of the research and analysis, confirming the three-factor structure that emerged from the EFA. The differential validity was also estimated and confirmed. According to the theoretical assumptions on which the SPWPPO-2 questionnaire was based, the more often a person is exposed to a given stimulus, the more likely it is that they will have a more positive affective attitude toward it. This effect is called the “Mere-Exposure Effect” [21]. The analyses carried out showed that people with mental disorders or diseases – those who need and benefit from psychological help – also have a slightly more positive attitude to online help.

Existing and developing online psychological assistance measurement tools are described in the literature worldwide [eg. 22], and SPWPPO-2 is a response to research and clinical needs in Poland. It is also worth noting that many researchers have made attempts to create tools designed to measure various aspects of the field referred to as e-mental health, from which the authors of this article drew inspiration and reliable knowledge [eg. 23]. In Poland, it is the first tool that defines attitudes toward psychological assistance provided online. In recent years, the provision of psychological assistance via the Internet has become commonplace. Further empirical research should focus on the factors that determine a patient’s attitude toward this type of help and the role of this assessment on the effectiveness of online help.

## 5. CONCLUSIONS

In summary, this questionnaire can be used for both scientific and clinical purposes. It can be used by mental health professionals to assess attitudes toward online psychological support for patients or potential patients. As a result, it will be possible to better adjust the forms of psychological assistance – direct and / or indirect – that are appropriate to their needs and preferences. In the field of mental health, the patient’s attitude will be the main and significant factor influencing the recovery process [24], and the SPWPPO-2 questionnaire will help in determining this attitude. The authors of the article are planning the next stage of research and analysis, including confirming the three-factor structure that came out of the EFA, which will affect the quality of the resulting tool.

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