

## Polish version of the *Depression Anxiety Stress Scale* (DASS-42) – adaptation and normalization

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### Summary

**Aim.** This study aimed to present the Polish adaptation and preliminary normalization of the *Depression Anxiety and Stress Scale* – 42 (DASS-42).

**Methods.** The study was conducted among 1,021 participants (625 females and 396 males) aged 18–83 years ( $M = 30.67$ ;  $SD = 13.25$ ). It was a non-clinical sample. Second sample was a group of 49 psychiatric patients (28 females and 21 males) aged 22–76 years ( $M = 49.40$ ;  $SD = 13.34$ ). The reliability of the DASS-42 was measured using Cronbach's  $\alpha$  coefficients and intraclass correlation coefficients (ICC).

**Results.** In the non-clinical sample the Cronbach's alpha coefficient was 0.93 points for the depression subscale; 0.89 points for the anxiety subscale; 0.92 for the stress subscale, and 0.96 for the DASS-42 total score. The ICC were satisfactory, between 0.37 and 0.49 points. Psychiatric patients obtained significantly higher results in all subscales and in a total score of the DASS-42 ( $p < 0.001$ ) than healthy participants. It is an indicator of good concurrent validity of the method. The effect size of the differences for all questionnaire indicators was large ( $0.96 < d < 1.44$ ). The results for the healthy men and women differed, while the age did not differentiate the respondents. The sten scale was developed taking into account the gender of the respondents.

**Conclusions.** The obtained results confirmed the satisfactory psychometric properties of the Polish version of the DASS-42. This inventory may be useful for screening in non-clinical groups and groups of psychiatric patients.

**Key words:** depression, DASS, normalization

### Introduction

Mental disorders are among the main causes of disease burden of human beings, next to somatic ailments, injuries and life-threatening factors. In the group of 25 men-

tal disorders, depressive and anxiety disorders are the most severe and most common [1]. The consequences that they generate often last throughout an individual's life and apply equally to men and women living around the world [2]. Data from the Institute for Health Metrics and Evaluation [3] indicate that the prevalence of symptoms of depressive disorders worldwide in all age groups and both genders increased from approximately 3.3% in 1990 to 3.76% in 2019. There was an increase noted in the pathological level of anxiety from 3.70% in 1990 to 4.05% in 2019. Additionally, the COVID-19 pandemic has created conditions conducive to factors responsible for the deterioration of people's mental health. The daily rate of SARS-CoV-2 virus infection and the decrease in human mobility are responsible for the increase in the frequency of diagnosis of depressive and anxiety disorders [4].

Scientific studies emphasize the need to authenticate the results of epidemiological studies due to applied research plans and measurement tools [2, 5]. In epidemiological screening studies, questionnaires are used to estimate the risk of disorders among asymptomatic people with latent disease and among people with a high probability of future development of the disease (providing the diagnosis of prodromal symptoms). A limited number of measures and a lack of sufficient statistical parameters contribute to an underestimation of the risk of emotional disorders in the population of people living in different parts of the world and creates difficulties in conducting comparative research. Not including cultural and social specificity in the process of recognizing disorders may lead to errors in the interpretation of prevalence rates in various cultural environments.

With regards to the questionnaire described in the article it should be emphasized that it is widely used both in the prevention of disease and in research conducted in many countries. The assessment of the risk of developing symptoms of emotional disorders may refer to groups of patients with specific somatic diseases [5] but also to healthy people belonging to various professions or environments. Recognition of depressive symptoms caused by occupational stress is of interest to occupational medicine specialists [6, 7]. One of the studies conducted by a group of family doctors showed that the diagnostic validity of the aforementioned disorders in patients was relatively low and ranged between 30 and 40% [8]. The reasons for this occurrence included, e.g., lack of accurate and easy-to-use self-report tools available to GPs. Therefore, it is important that a physician of any specialty be able to quickly assess healthy and somatically ill people for the presence of these disorders using screening tools.

The *Depression Anxiety and Stress Scale (DASS-42)* is a self-report questionnaire developed by P.F. and S.H. Lovibond in 1995 [11]. The intention of the authors was to construct a measuring tool that would allow to increase the differences behind the symptoms of depression and anxiety in a satisfactory manner. It consisted of a list of statements highlighting the features specific to both groups of symptoms and showing their common features. Differentiating the symptoms of depression and anxiety with the use of the research tool was not a simple task despite the fact the mechanisms of the formation of each of the disorders were known [11]. Clark and Watson [12], who were the first to address the problem of differential diagnosis of depression and anxiety, observed in only some patient's symptoms belonging to only one type of disorder.

Somatic symptoms recognized by clinicians and patients as related to depression turned out to be weak discriminators between depressive and anxiety disorders. Another goal of the Lovibonds was to build a tool that would allow them to accurately recognize symptoms in clinical and non-clinical groups.

When constructing the DASS-42, its authors used a 3-factor model constructed by Clark and Watson to diagnose mixed anxiety-depression disorders. The model distinguishes symptoms of anhedonia, over-excitation and stress, as the unique features of depression are low mood and anhedonia while anxiety is characterized by excessive neurovegetative stimulation [12]. The features common to depression and anxiety include difficulty relaxing, nervous tension, irritability, and agitation. This syndrome is called stress. The DASS-42 questionnaire was developed with items relating to 3 groups of symptoms. The depression subscale includes following symptoms: dysphoria, hopelessness, self-devaluation, self-deprecation, loss of interest, anhedonia, and apathy (inertia). The group of anxiety symptoms includes vegetative agitation (autonomic arousal), skeletal muscle tension (skeletal musculature effects), situational and generalized anxiety (subjective experience of anxious affect). The group of symptoms of stress includes difficulties in reducing internal tension, nervous agitation, excitability and agitation (easily upset/agitated), and irritability and over-reactivity (irritable/over-reactive). Even though the tool was developed based on data derived from healthy people, it is at present successfully used both in clinical and non-clinical groups.

Marta Makara-Studzińska, Beata Petkowicz, Anna Urbańska, and Jacek Petkowicz translated the original version of the DASS-42 (also known as the full version) into Polish [13]. The questionnaire consists of 42 items forming 3 14-element groups of statements examining the symptoms of depression, anxiety and stress.

Currently 55 language versions of the DASS questionnaire are available in full (DASS-42) and short (DASS-21) versions [14]. By 2021 the full version has been adapted in more than 15 countries although the full validation procedure has not been carried out everywhere [15]. Studies have shown good psychometric properties of the DASS in adults with anxiety, depression and mixed disorders [16, 17] as well as among healthy people [16, 18]. It is related to the internal consistency of the DASS subscales (42 – and 21-items) and the 3-factor solution reflecting 3 subscales, which was consistently repeated in the language versions with slight differences [17–20]. However, the tool has its limitations primarily concerning its length, which extends the research time and the time-consuming analyzing of results. For this reason, shortened versions were created: 21-item [21, 22] 18-item [23] 12-item [16, 21], and 3-item [24]. The 21-item version of the questionnaire, which is the most frequently used in the world, was developed by the Lovibonds by reducing the items that make up the full version [11]. The confirmatory analysis carried out in 2021 on the Polish non-clinical sample indicated two 3-factor models for the full version and two 3-factor models for the 21-item and 12-item version as having the best data fit [25].

Taking into account the described limitations and the lack of normalization data in the Polish population of the DASS-42 questionnaire, the following objectives of the study were formulated: (a) to check of the preliminary normalization data of the

DASS-42, (b) to explore of the reliability of the DASS-42, and (c) to check of the diagnostic validity of the DASS-42.

## Material and method

### Participants

The test sample included inhabitants of towns and villages from southern Poland. The criteria for inclusion in the research were age above 18 years of age, the ability to read the questionnaire text independently, understand its content and answer independently. There was no upper age limit. The exclusion criterion was the current or past psychiatric diagnosis of a person willing to complete the questionnaire. Students of the Jagiellonian University Medical College participated in the recruitment as volunteers. The individuals invited to participate in the research were known to the recruiters (family members, friends). Volunteers were trained in the distribution, collection and safe keeping of questionnaires in accordance with the regulations of the Act on the Protection of Personal Data. After signing the informed consent form participants were handed a sociodemographic datasheet and a DASS-42 questionnaire. Each respondent was instructed on how to fill in the questionnaire. Participation in the study was voluntary and anonymous. The data were processed anonymously. The distribution of sets of documents and the collection of completed questionnaires along with the sociodemographic data sheet took place from January to May 2021. The average time from the distribution of the questionnaire to its receipt was 2 weeks. Data were obtained from a group of 1,294 respondents. After deleting incomplete and incorrect records (using the listwise removal method) data from 1,021 participants (625 women and 396 men aged 18–83;  $M = 30.67$ ,  $SD = 13.25$ ) were analyzed. The percentage of missing data for each item ranged from 10.7% to 11.1%. The mean of the DASS-42 scores for the overall score was 33.08 ( $SD = 22.68$ ); for the Depression subscale – 9.22 ( $SD = 8.46$ ); for the Anxiety subscale – 8.78 ( $SD = 7.48$ ); and for the Stress subscale – 15.08 ( $SD = 9.07$ ).

The clinical group of patients with mental disorders included 28 women and 21 men aged between 22 and 76 years ( $M = 49.40$ ;  $SD = 13.34$ ). Psychiatric patients were treated at the Medi-Li-Norm Mental Health Clinic in Limanowa and at the Day Ward of the Clinic of Psychiatry, Public Clinical Hospital No. 1, Pomeranian Medical University in Szczecin. 28% of patients receiving psychiatric treatment were diagnosed with F40–F48 (neurotic, stress-related and somatoform disorders), 22.8% with F30–F39 (mood disorders), 15.8% with F00–F09 (organic, including symptomatic, mental disorders), 12.3% with F20–F29 (schizophrenia, schizotypal and delusional disorders), 10.6% with F10–F19 (mental and behavioral disorders due to psychoactive substance use), 10.5% with F60–F69 (disorders of adult personality and behavior). 5.2% of patients had dual diagnosis.

The research procedure was approved by the Ethics Committee of the Jagiellonian University (decision no. 1072.6120.65.2021).

### Research tools

The *Depression, Anxiety and Stress Scale* version 42 (DASS-42) is made up of a list of 42 affirmative sentences. The test involves responding to each sentence by selecting the degree to which its content applied to the tested person during the preceding week of the measurement. The respondent has a 4-point Likert scale at his disposal described as follows: 0 – “did not apply to me at all”, 1 – “applied to me to some degree, or some of the time”, 2 – “applied to me to a considerable degree, or a good part of time”, 3 – “applied to me very much, or most of the time”. The sentences deal with emotional feelings, somatic experiences and human behavior. Each of the 3 groups of symptoms is examined with 14 sentences. The test result is expressed numerically, separately for each group of symptoms and ranges from 0 points (minimum) to 42 points (maximum). The overall score being the sum of all answers ranges from 0 points to 126 points.

Confirmatory factor analysis validated the 3-factor structure of the questionnaire in the Polish population [25]. The best statistical parameters were obtained by the model of 3 correlated factors with cross-loads (RMSEA = 0.052; SRMR = 0.047; GFI = 0.870; CFI = 0.911) and 3 correlated factors of the second order with cross-loads (RMSEA = 0.052; SRMR = 0.047; GFI = 0.870; CFI 0.911). For comparison we give the parameters of the 3-factor model which showed the weakest fit to the data in all indicators except for the Root Mean Square Error of Approximation (RMSEA): RMSEA = 0.068; SRMR = 0.056; GFI = 0.797; CFI = 0.845.

### Statistical analysis

The obtained results were statistically analyzed using the IBM SPSS version 27 statistical package. Continuous variables are presented as means ( $M$ ) and standard deviations ( $SD$ ). In order to check the normal distribution of variables, the Kolmogorov-Smirnov test, the level of kurtosis and skewness were used. The distribution was assumed to be close to normal when the kurtosis level was between  $-7$  and  $+7$  points and the skewness was between  $-2$  and  $+2$  points [26]. Moreover, the graphical representation of the variables was analyzed. The Pearson's  $r$  correlation coefficient was used to determine the relationship between the variables. Student's  $t$ -test was used to determine the intergroup differences. The effect size of intergroup differences was determined using Cohen's  $d$  index [27]. In order to determine the level of reliability indices of the selected variables, the Cronbach's  $\alpha$  index was calculated. In addition, to determine the consistency, an intraclass correlation coefficient (ICC) based on a 2-factor mixed model (3.1) with a 95% confidence interval was used [28]. In order to enable the interpretation of the results obtained in individual scales and the total score, the raw scores were transformed into a sten scale with an average of 5.5 and a standard deviation of 2.25 points [29].

## Results

Table 1 presents the characteristics of the variables in the group of healthy participants and separately in the group of healthy women and in the group of healthy men.

**Table 1. Descriptive statistics for 3 scales and the overall score in the DASS-42 in the group of healthy participants and in the group of healthy women and in the group of healthy men**

	M	SD	Skewness	Kurtosis	Minimum	Maximum
Results in the group of healthy participants (n = 1,021)						
Depression scale	9.22	8.46	1.07	0.64	0	41
Anxiety scale	8.78	7.48	1.10	0.76	0	40
Stress scale	15.08	9.07	0.47	-0.29	0	41
Overall Score	33.08	22.68	0.82	0.30	0	119
Results in the group of healthy women (n = 625)						
Depression scale	9.86	8.52	0.92	0.20	0	40
Anxiety scale	9.48	7.70	1.00	0.51	0	40
Stress scale	15.93	8.98	0.36	-0.38	0	40
Overall Score	35.27	22.84	0.69	0.00	0	119
Results in the group of healthy men (n = 396)						
Depression scale	8.21	8.27	1.36	1.65	0	41
Anxiety scale	7.68	6.99	1.28	1.32	0	34
Stress scale	13.74	9.07	0.67	0.01	0	41
Overall Score	29.62	22.02	1.08	1.09	0	115

DASS-42 – Depression Anxiety and Stress Scale version 42

As shown in Table 2, there was no significant relationship between the age of the respondents and the results in 3 scales and the overall score in the DASS-42 in the group of healthy individuals and separately in the group of healthy women and in the group of healthy men, which prompted the decision not to include this variable in the procedure of preparation of results on the sten scale.

**Table 2. The relationship between age and the 3 scales and the overall score in the DASS-42 in the group of healthy participants and in the group of healthy women and in the group of healthy men**

	Depression scale		Anxiety scale		Stress scale		Overall Score	
	r	p	r	p	r	p	r	p
Results in the group of healthy participants (n = 1,021)								
Age	-0.03	0.274	0.01	0.776	-0.04	0.232	-0.02	0.428

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Results in the group of healthy women (n = 625)								
Age	-0.02	0.554	0.04	0.310	-0.04	0.319	-0.01	0.787
Results in the group of healthy men (n = 396)								
Age	-0.04	0.426	-0.03	0.536	-0.02	0.698	-0.03	0.512

## DASS-42 – Depression Anxiety and Stress Scale version 42

As shown in Table 3, the group of healthy women compared to the group of healthy men obtained significantly higher scores on all 3 scales (respectively:  $p = 0.002$ ;  $p < 0.001$ ;  $p < 0.001$ ) and in the overall result ( $p < 0.001$ ) in the DASS-42. The effect size of differences for all questionnaire indicators was small ( $0.19 < d < 0.24$ ). Taking into account the differences between groups due to gender, it was decided to prepare the results on the sten scale separately for healthy women and healthy men.

**Table 3. Significance of differences between the group of healthy women and the group of healthy men in the scores on 3 scales and the overall score in the DASS-42**

	t	p	d
Depression scale	3.06	0.002	0.19
Anxiety scale	3.86	0.000	0.24
Stress scale	3.78	0.000	0.24
Overall Score	3.90	0.000	0.24

## DASS-42 – Depression Anxiety and Stress Scale version 42

Table 4 provides guidelines for converting raw scores to a sten scale. In order to precisely assess the obtained results, the interpretation may refer to the following classification of the sten scale: (a) very low results = sten score of 1, (b) low results = sten score of 2–3, (c) reduced results = sten score of 4, (d) average results = sten score of 5–6, (e) elevated results = score of 7, (f) high results = score of 8–9, and (g) very high results = score of 10 [30].

**Table 4. Sten scores for the 3 scales and the overall score in the DASS-42 broken down by gender**

Sten scores	Raw scores								Sten scores
	Depression scale		Anxiety scale		Stress scale		Overall Score		
	Group of women	Group of men	Group of women	Group of men	Group of women	Group of men	Group of women	Group of men	
1	–	–	–	–	–	–	–	–	1
2	–	–	–	–	0–2	0	0–1	–	2
3	0–1	–	0–1	0	3–6	1–4	2–12	0–7	3
4	2–5	0–4	2–5	1–4	7–11	5–9	13–23	8–18	4

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5	6–9	5–8	6–9	5–7	12–15	10–13	24–35	19–29	5
6	10–14	9–12	10–13	8–11	16–20	14–18	36–46	30–40	6
7	15–18	13–16	14–17	12–14	21–24	19–22	47–58	41–51	7
8	19–22	17–20	18–21	15–18	25–29	23–27	59–69	52–62	8
9	23–26	21–24	22–24	19–21	30–33	28–31	70–79	63–72	9
10	27–40	25–41	25–40	22–34	34–40	32–41	80–119	75–115	10

DASS-42 – Depression Anxiety and Stress Scale version 42

Table 5 presents the diagnostic key allowing to calculate the results of the questionnaire divided into 3 subscales. Each of the 3 groups of symptoms consists of 14 statements. The theoretical range of results is between 0 and 42 points. A higher score is an indicator of a greater severity of the examined feature. The total score is the sum of partial scores and ranges from 0 to 126 points.

Table 5. **DASS-42: Diagnostic Key**

Symptom groups	Item numbers
Depression	3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, 42
Anxiety	2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40, 41
Stress	1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, 39

DASS-42 – Anxiety and Stress Depression Scale version 42

As shown in Table 6, a satisfactory level of the reliability index was obtained in the group of healthy people and separately in the group of healthy women and in the group of healthy men for all 3 scales and the overall DASS-42 score. The value of the intraclass correlation coefficient (ICC) between the items making up the depression scale was 0.49 points, the anxiety scale – 0.37 points, the stress scale – 0.46 points, and between the items making up the overall result of the questionnaire – 0.38 points for all respondents.

Table 6. **Values of the Cronbach's  $\alpha$  coefficient and intraclass correlation coefficient (ICC) for 3 scales and the overall score in the DASS-42 in the group of healthy participants and in the group of healthy women and in the group of healthy men**

Cronbach's $\alpha$ Depression scale	Number of items	Cronbach's $\alpha$ Anxiety scale	Number of items	Cronbach's $\alpha$ Stress scale	Number of items	Cronbach's $\alpha$ Overall Score	Number of items
Results in the group of healthy participants (n = 1,021)							
0.930	14	0.893	14	0.923	14	0.963	42
Results in the group of healthy women (n = 625)							
0.929	14	0.896	14	0.922	14	0.962	42

*table continued on the next page*



Results in the group of healthy men (n = 396)															
0.931		14		0.884		14		0.924		14		0.962		42	
ICC Depression scale	p	95% CI		ICC Anxiety scale	p	95% CI		ICC Stress scale	p	95% CI		ICC Overall score	p	95% CI	
Results in the group of healthy participants (n = 1,021)															
0.49	0.000	0.46–0.51		0.37	0.000	0.35–0.40		0.46	0.000	0.44–0.49		0.38	0.000	0.36–0.40	
Results in the group of healthy women (n = 625)															
0.48	0.000	0.45–0.52		0.38	0.000	0.35–0.41		0.46	0.000	0.43–0.49		0.38	0.000	0.35–0.41	
Results in the group of healthy men (n = 396)															
0.49	0.000	0.45–0.53		0.35	0.000	0.32–0.39		0.47	0.000	0.43–0.51		0.37	0.000	0.34–0.41	

DASS-42 – Depression Anxiety and Stress Scale version 42; CI – confidence interval

Statistical analysis showed that the group of patients with mental disorders and the group of healthy participants did not differ in terms of gender ( $\chi^2 = 0.04$ ;  $p = 0.839$ ) and age ( $t = 0.28$ ;  $p = 0.778$ ).

As shown in Table 7, the group of patients with mental disorders compared to the non-clinical group obtained significantly higher scores on all 3 scales (for all scales:  $p < 0.001$ ) and in the overall score ( $p < 0.001$ ) in the DASS-42. The effect size of differences for all questionnaire indicators was large ( $0.96 < d < 1.44$ ).

**Table 7. Significance of differences between the group of patients with mental disorders and the group of healthy participants in the scores on 3 scales and the overall score in the DASS-42**

	A group of patients with mental disorders (n = 49) M (SD)	Group of healthy participants (n = 49) M (SD)	t	p	d
Depression scale	18.22 (11.17)	6.84 (7.09)	6.03	0.000	1.23
Anxiety scale	17.86 (10.89)	5.69 (5.17)	7.07	0.000	1.44
Stress scale	20.94 (10.85)	11.65 (8.64)	4.69	0.000	0.96
Overall Score	57.02 (30.14)	24.18 (18.97)	6.45	0.000	1.32

DASS-42 – Depression Anxiety and Stress Scale version 42

## Discussion

The study presented in the article had 3 objectives: (a) to check the preliminary normalization data of the DASS-42, (b) to explore the reliability of the DASS-42, and (c) to check the diagnostic validity of the Polish version of the DASS-42 questionnaire.

Following the differentiation of the results according to the gender of the examined person, temporary sten norms for women and men were developed and guidelines for converting raw results into normalized ones were prepared. The interpretation of the results of the sten scale was used, distinguishing very low, low, lowered, average, elevated, high, and very high results. The proposed initial standards help the researcher to interpret the obtained results taking into account the gender of the respondents.

The DASS-42 questionnaire seems to be a useful instrument for measuring features of depression, symptoms of anxiety disorders and mental tension in non-clinical groups. It is a diagnostic tool that provides complete clinical information that allows for full screening by healthcare professionals.

The reliability of the subscales of the adapted tool was satisfactory. Cronbach's  $\alpha$  coefficients calculated for individual subscales were high and at the same time close to those obtained by Antony et al. in the study using the original version [16]. The obtained values of the Cronbach's  $\alpha$  coefficients were higher than those obtained in the study with the original version by Lovibond and Lovibond [11], in the study of a group of students in Turkey [31], and those in the study of the Persian version of the tool in Afghanistan [15]. It should be noted that in some cultural versions better statistical parameters were achieved by versions of the tool devoid of some statements [15, 32, 33], which was not the case with the Polish version [25]. The values of the intraclass correlation coefficient (ICC) were mostly satisfactory [34].

Let us now turn to discuss the results of diagnostic validity, i.e., the comparison of healthy participants and participants from clinical groups. From the outset it should be noted that our results obtained in the study of a non-clinical trial were higher than the data obtained in the study using the original version of the tool [11]. The differences may result from many reasons including the fact that the Australian group was homogeneous in terms of education and was characterized by a lower age ( $M = 21.0$  years). A comparable group is a group of 1,771 British people from various backgrounds and workplaces ( $M = 40.9$  years;  $SD = 15.9$ ) [18]. The data in individual subscales and in the form of the overall score were, however, much lower than in the Polish studies.

The results of our own research confirmed good parameters of the diagnostic validity of the DASS-42 in the Polish population. When comparing the results obtained by participants from non-clinical groups and psychiatric patients there are clear differences between the groups. Based on Cohen's  $d$ -difference effect assessment the tool differentiated the groups the most in the anxiety and depression subscales and the least in the stress subscale. The results obtained in the study of the group of psychiatric patients were similar in the depression and stress subscales and higher in the anxiety subscale than those obtained in the study of the group of Dutch patients with anxiety-depression disorders [8]. Similarly, in the case of the depression and stress subscales they were within the range of the results obtained in the study of the American group of psychiatric patients with anxiety and mood disorders, while they were higher than those mentioned in the anxiety subscale. It should be noted that the American group covered a smaller spectrum of diagnoses [35].

The results of the own research indicate the validity of the tool in terms of the compliance of its results with the external criterion which is the diagnosis of a mental disorder.

### **Limitation of the study**

The limitation of the conducted research resulted from the inability to conduct a nationwide survey with quota sampling. Despite this, the obtained data already allow for an initial standardization of the diagnostic tool as was the case with other diagnostic tools [36]. Another limitation was the small number of patients with mental disorders, which only allowed for the creation of a clinically heterogeneous group. This made it impossible to identify differences in individual subscales between patients with different clinical diagnoses. In the future, we plan to conduct a study using a larger group of patients to see if the tool can detect specific symptoms in each group of diagnoses. Another limitation is the lack of convergent and divergent validity measurement results, although the aforementioned measurement is planned.

### **Conclusions**

The obtained results indicate that the Polish version of the DASS-42 is characterized by good psychometric properties. Both the indicators of reliability and diagnostic validity turned out to be so high that the described questionnaire can be successfully used in research and clinical diagnostics of healthy participants and participants with mental disorders.

Authors of other studies on the DASS-42 indicate the possibility of using the questionnaire in clinical trials of psychiatric patients [17, 33] but with caution in interpreting the obtained results. The study also presents the results of the preliminary Polish normalization (sten norms) which may be helpful in detecting symptoms suggesting difficulties in depression, anxiety or stress in healthy people or people with the so-called risk groups.

In addition, due to numerous reports on the deteriorating mental health of Polish society as a result of the COVID-19 pandemic and the unstable international situation, it is necessary to quickly identify people at risk of a mental breakdown. Risk assessment criteria include identifying signs of increased anxiety, stress and depressed mood. Therefore, the obtained results support the recommendation of the DASS-42 as a tool that can be used not only by psychologists but also by doctors of various specialties including occupational medicine doctors as well as other clinicians and nursing staff. The frequent use of the described questionnaire in international research allows for the comparison of the obtained results also by Polish researchers.

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## ANNEX

**Skala Depresji Lęku i Stresu wersja 42 (DASS-42)**

P.F. Lovibond, S.H. Lovibond

*(Adaptacja i normalizacja: M. Makara-Studzińska, M. Załuski, E. Tyburski)*

**Proszę przeczytać każde stwierdzenie i skreślić cyfrę 0, 1, 2 lub 3, która wskazuje, jak bardzo dane stwierdzenie odnosi się do Ciebie w okresie ostatniego tygodnia. Nie ma dobrych lub złych odpowiedzi, dlatego nie zastanawiaj się zbyt długo .**

*Cyfry oznaczają:*

1. Nie odnosiło się to do mnie w ogóle
2. Odnosiło się to do mnie w pewnym stopniu lub przez pewien czas
3. Odnosiło się to do mnie w dużym stopniu lub przez długi czas
4. Odnosiło się to do mnie w bardzo dużym stopniu lub przez większość czasu

1	Denerwowałam/denerwowałam się całkiem zwyczajnymi rzeczami	0	1	2	3
2	Miałam/miałem uczucie suchości w ustach	0	1	2	3
3	Nie mogłam/nie mogłem doświadczać pozytywnych uczuć	0	1	2	3
4	Odczuwałam/odczuwałem trudności w oddychaniu (np. zbyt szybkie oddychanie, uczucie braku oddechu bez wcześniejszego wysiłku fizycznego)	0	1	2	3
5	Miałam/miałem trudności z chodzeniem	0	1	2	3
6	Miałam/miałem tendencję do nadmiernego reagowania na różne sytuacje	0	1	2	3
7	Miałam/miałem uczucie drżenia, osłabienia	0	1	2	3
8	Trudno było mi się zrelaksować	0	1	2	3
9	W sytuacjach, kiedy odczuwałam/odczuwałem lęk, największa ulga przychodziła, kiedy sytuacje te dobiegały końca	0	1	2	3
10	Czułam/czułem, że nic mnie w życiu nie spotka	0	1	2	3
11	Raczej łatwo się denerwowałam/denerwowałem	0	1	2	3
12	Używałam/używałem dużo nerwowej energii	0	1	2	3
13	Czułam/czułem się smutna/smutny i depresyjna/depresyjny	0	1	2	3
14	Czułam/czułem się zniecierpliwiona/zniecierpliwiony, kiedy coś się opóźniało (np. na światłach, w windzie, kiedy musiałem na coś czekać)	0	1	2	3
15	Miałam/miałem uczucie omdlewania	0	1	2	3
16	Czułam/czułem, że straciłem zainteresowanie właściwie wszystkim	0	1	2	3
17	Czułam/czułem się niewartościową osobą	0	1	2	3

18	Czułam/czułem, że jestem raczej przewrażliwiona/przewrażliwiony)	0	1	2	3
19	Pociłam/pociłem się w sposób widoczny (np. spocone dłonie), kiedy nie było gorąco ani nie wykonywałam/wykonywałem wysiłku fizycznego	0	1	2	3
20	Czułam/czułem się przestraszona/przestraszony bez żadnego powodu	0	1	2	3
21	Czułam/czułem, że nie warto żyć	0	1	2	3
22	Bardzo trudno było mi się odprężyć	0	1	2	3
23	Miałam/miałem trudności w polykaniu	0	1	2	3
24	Nie odczuwałam/nie odczuwałem żadnego zadowolenia z rzeczy, które robiłam/ robiłem	0	1	2	3
25	Czułam/czułem bicie swojego serca, kiedy nie wykonywałam/wykonywałem żadnego wysiłku fizycznego (np. odczuwanie przyspieszenia akcji serca, zamierania serca)	0	1	2	3
26	Czułam/czułem się przybita/przybity i smutna/smutny	0	1	2	3
27	Czułam/czułem, że jestem bardzo drażliwa/drażliwy	0	1	2	3
28	Czułam/czułem, że jestem bliska/bliski wpadnięcia w panikę	0	1	2	3
29	Bardzo trudno było mi się uspokoić, kiedy coś mnie zdenerwowało	0	1	2	3
30	Bałam/bałem się, że będę zbита/zbity z tropu przez jakieś zwyczajne, ale nieznanne mi zadania	0	1	2	3
31	Nie mogłam/nie mogłam się ucieszyć z niczego	0	1	2	3
32	Trudno było mi wytrzymać, kiedy ktoś przerwał mi coś, co akurat robiłam/robiłem	0	1	2	3
33	Byłam/byłem w stanie nerwowego napięcia	0	1	2	3
34	Czułam/czułem się całkowicie bezwartościowa/bezwartościowy(-y)	0	1	2	3
35	Nie mogłam/nie mogłem znieść, jak cokolwiek przeszkadzało mi w tym, co akurat robiłam/robiłem	0	1	2	3
36	Czułam/czułem się przerażona/przerażony	0	1	2	3
37	Nie miałam/nie miałem żadnych nadziei na przyszłość	0	1	2	3
38	Czułam/czułem, że życie jest bezwartościowe	0	1	2	3
39	Czułam/czułem się podminowana/podminowany	0	1	2	3
40	Obawiałam/obawiałem się sytuacji, kiedy mogłabym/mógłbym wpaść w panikę i zrobić z siebie głupca	0	1	2	3
41	Odczuwałam/odczuwałem drżenia (np. rąk)	0	1	2	3
42	Trudno było mi coś zacząć	0	1	2	3

Consent to use the questionnaire can be obtained at the e-mail address:  
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