

# WFOT Congress

## Development and psychometric evaluation of the occupational adaptation scale for individuals with schizophrenia (OAS-S)

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# Presentation Outline

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Background

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Literature Gap

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Aim

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Methods

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Results (Validity & Reliability)

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Conclusion

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# THE GLOBAL IMPACT OF SCHIZOPHRENIA

**>20 million**

Estimates suggest that more than 20 million individuals globally live with schizophrenia.<sup>2,6</sup>

**1 in 222**

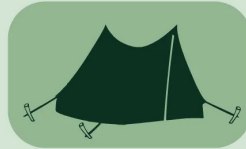
Among adults, the prevalence rate is roughly 1 in 222.<sup>1</sup>

## DISABILITY OF SCHIZOPHRENIA

Schizophrenia is associated with significant impairments in psychosocial function, which can make it difficult to navigate various aspects of life and may result in the following:<sup>2</sup>



Poverty



Homelessness



Unemployment



Difficulty with household and self-care tasks



Reliance on caregivers and mental health services

## SCHIZOPHRENIA IS BURDENSOME

Schizophrenia is widely acknowledged as a burdensome condition due to the significant disability associated with the disease<sup>2,3,6</sup> as well as its elevated mortality.<sup>4,5</sup>



Individuals diagnosed with schizophrenia have a life expectancy of 10-20 years below that of the general population.<sup>4,5</sup>

According to the GBD 2016 data, schizophrenia was ranked as the 12th most disabling disorder out of 310 diseases and injuries globally.<sup>2,3</sup> Additionally, the GBD 2019 data estimated that out of all the conditions examined, the acute state of psychosis had the highest disability weight.<sup>6</sup>



## ECONOMIC COST OF SCHIZOPHRENIA

SCHIZOPHRENIA TAKES A SIGNIFICANT TOLL ON INDIVIDUALS DURING THEIR MOST ECONOMICALLY PRODUCTIVE YEARS<sup>2</sup>. SIGNIFICANT ECONOMIC LOSS OCCUR BECAUSE OF THE FOLLOWING:<sup>2</sup>



Reduced productivity experienced by individuals and their loved ones



Direct expenses due to medical treatment



Significant pressure placed on healthcare and social welfare systems

(1) World Health Organization. Schizophrenia fact sheet. 2022. Available at: <https://www.who.int/news-room/fact-sheets/detail/schizophrenia>

(2) Fiona J Charlson and others, Global Epidemiology and Burden of Schizophrenia: Findings From the Global Burden of Disease Study 2016, Schizophrenia Bulletin, Volume 44, Issue 6, November 2018, Pages 1195–1203, <https://doi.org/10.1093/schbul/sby058>

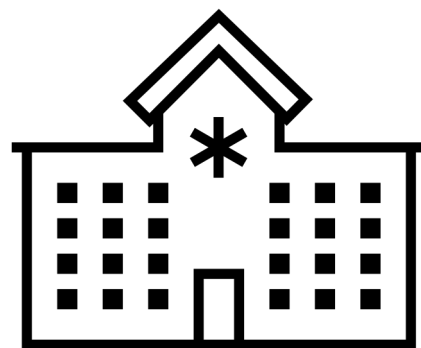
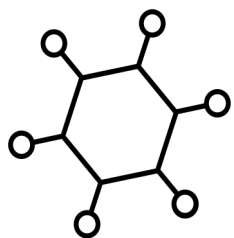
(3) Vos T, Abajobir AA, Abate KH et al. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017;390:1211–1259.

(4) Laursen TM, Nordentoft M, Mortensen PB. Excess early mortality in schizophrenia. Annual Review of Clinical Psychology, 2014;10, 425-438.

(5) Correll CU, Solmi M, Croatto G, Schneider LK, Rohani-Montez SC, Fairley L, Smith N, Bitter I, Gorwood P, Taipale H, Tiihonen J. Mortality in people with schizophrenia: a systematic review and meta-analysis of relative risk and aggravating or attenuating factors. World Psychiatry. 2022 Jun;21(2):248-271. doi: 10.1002/wps.20994. PMID: 35524619; PMCID: PMC9077617.

(6) Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019 - The Lancet Psychiatry

# Schizophrenia and Occupational Adaptation



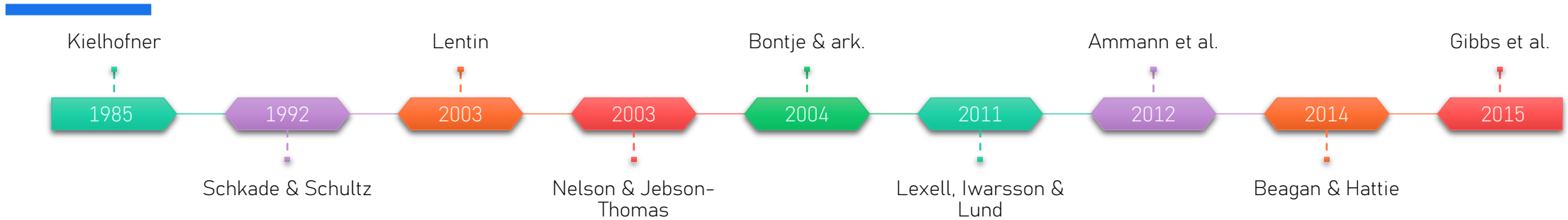
Individuals with schizophrenia often experience occupational performance and participation problems due to the negative consequences of the illness.

Difficulties in occupational performance and participation may lead to internal conflicts, reduced motivation, and other negative psychological factors.

The ability of individuals with schizophrenia to cope with these challenges is closely related to their level of occupational adaptation.

Occupational adaptation plays a key role in managing illness-related difficulties and supporting engagement in meaningful occupations.

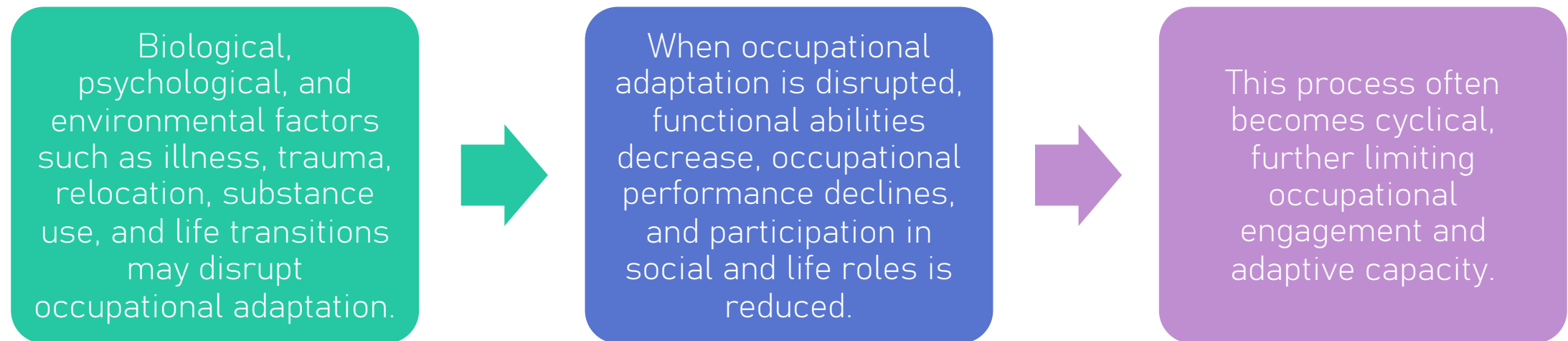
# Definitions of Occupational Adaptation in the Literature



Occupational Adaptation Definition	Author(s), Year
An individual's response to an occupational challenge	Schkade & Schultz, 1992
The influence of occupational performance on an individual's developmental structure	Nelson & Jepsen-Thomas, 2003
A process of overcoming limiting factors affecting functioning	Lentin, 2003
Responding to change and life transitions	Bontje et al., 2004
The development of a positive occupational identity and the gradual achievement of occupational competence within an environmental context	Kielhofner, 1985
A continuous, non-linear process toward achieving a desired sense of self	Lexell, Iwarsson & Lund, 2011
An outcome of engagement in occupations necessary for recovery	Ammann, Satink & Andresen, 2012
A process of transforming the meaning of occupation and/or the self	Beagan & Hattie, 2014
A process of regaining lost roles and engaging in alternative occupations	Gibbs, Boshoff & Stanley, 2015

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# Disruption of Occupational Adaptation



# Recommendations from the Literature

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There are **only a few studies** addressing occupational adaptation in individuals with schizophrenia.



Considering health and well-being outcomes, research in this population can make a **significant contribution** to the occupational therapy literature.



To advance both research and clinical practice, **valid, effective, and reliable assessment tools** need to be developed.



There is a **notable lack of published and developed instruments** specifically designed to measure occupational adaptation.

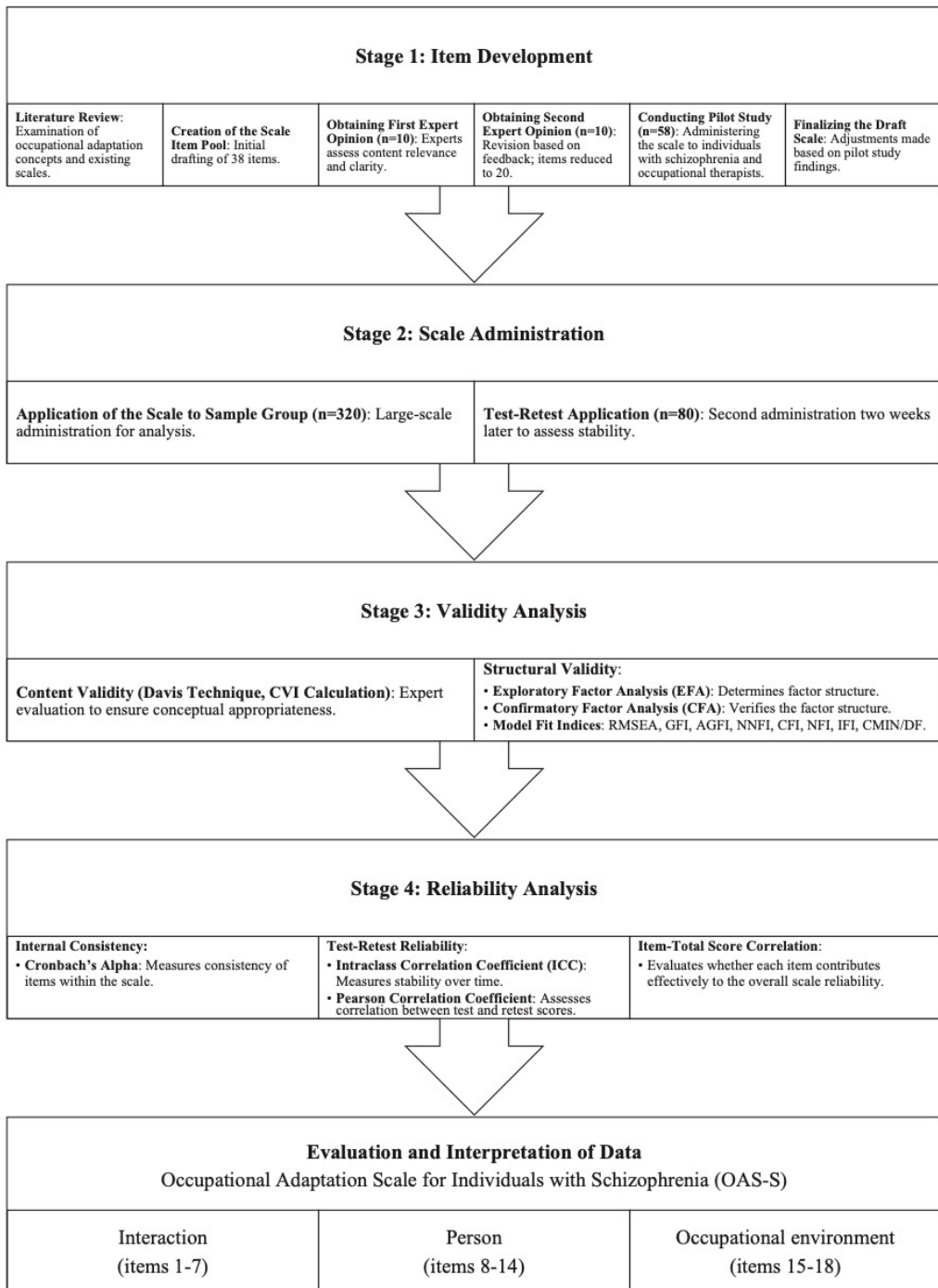


The **limited number of scale development studies** in the literature highlights the importance of the measurement development process.

# Aim



The aim of this study was to develop and psychometrically evaluate an occupational adaptation scale for individuals with schizophrenia.



# Methods

Participants recruited from outpatient psychiatric clinics and community rehabilitation services in Istanbul

Inclusion criteria:

- DSM-5 diagnosis,
- age  $\geq 18$ ,
- literate,
- Turkish-speaking

Exclusion criteria:

- Comorbid chronic mental disorders
- or incomplete responses

# Results

**Table 1.** Sociodemographic information of participants ( $n = 320$ ).

Variable	Min.	Max.	Mean (SD)
Age, year	18	62	38.35 (10.4)
Disease duration, year	1	35	15.25 (11.6)
Gender	<i>n</i>	%	
Women	109	34.06	
Men	211	65.94	
Marital status			
Married	123	38.43	
Single	162	50.63	
Divorced	35	10.94	
Education status			
Primary school	15	4.69	
Middle school	35	10.93	
High school	125	39.06	
University	122	38.13	
Higher education	23	7.19	
Income level			
Low	25	7.82	
Lower middle	48	15.00	
Upper middle	114	35.62	
High	133	41.56	
Treatment received			
Pharmacological	295	92.19	
Psychosocial	239	74.69	
Treatment method			
Outpatient	198	61.87	
Hospitalized/ Inpatient	122	38.13	

**Table 2.** Factor structure of the OAS-S.

Scale items	Factor loads		
	Factor 1	Factor 2	Factor 3
Item 1	0.854		
Item 2	0.654		
Item 3	0.715		
Item 4		0.813	
Item 5		0.902	
Item 6		0.768	
Item 7	0.917		
Item 9	0.802		
Item 10		0.685	
Item 11		0.704	
Item 12		0.612	
Item 13	0.765		
Item 14	0.724		
Item 16		0.789	
Item 17			0.695
Item 18			0.784
Item 19			0.567
Item 20			0.815
Eigenvalues	7.655	7.564	3.985
Explanation rate of variance (%)	40.765	40.234	17.123
Cumulative rate of variance (%)	40.765	53.234	69.925

OAS-S = Occupational Adaptation Scale-Schizophrenia; Factor 1 = Interaction; Factor 2 = Person; Factor 3 = Occupational environment; Explanation rate of variance = refers to the proportion of the total variance in the data that is accounted for by each factor; Cumulative rate of variance = represents the total variance explained by all extracted factors up to a given point, showing the overall explanatory power of the factor structure.

**Table 3.** Calculated fit index values of the OAS-S.

Criterion	Perfect fit	Acceptable fit	Pre-modification finding	Post-modification finding
RMSEA	$0 \leq \text{RMSEA} \leq 0.05$	$0.05 < \text{RMSEA} \leq 0.09$	0.070	0.045
GFI	$0.95 < \text{GFI} < 1$	$0.90 < \text{GFI} < 0.95$	0.925	0.954
AGFI	$0.90 < \text{AGFI} < 1$	$0.85 < \text{AGFI} < 0.90$	0.832	0.885
NNFI	$0.95 \leq \text{NNFI} \leq 1$	$0.90 \leq \text{NNFI} < 0.95$	0.895	0.935
CFI	$0.95 \leq \text{CFI} \leq 1$	$0.90 \leq \text{CFI} < 0.95$	0.915	0.946
NFI	$0.95 < \text{NFI} < 1$	$0.90 < \text{NFI} < 0.95$	0.875	0.964
IFI	$0.95 \leq \text{IFI} \leq 1$	$0.90 \leq \text{IFI} < 0.95$	0.911	0.973
CMIN/DF	$2 < \text{CMIN}/\text{df} < 3$	$3 < \text{CMIN}/\text{DF} < 5$	2.775	2.405

RMSEA: The Root Mean Square Error of Approximation; GFI: Good Fit Index; AGFI: Adjusted Good Fit Index; NNFI: Non-normed Fit Index; CFI: Comparative Fit Index; NFI: Normed Fit Index; IFI: Incremental Fit Index; CMIN/df: Chi-square Fit Test.

**Table 4.** Test-retest findings ( $n = 80$ ).

Subscale	Cronbach's $\alpha$	ICC	Pearson correlation coefficient
Factor 1 (7 items)	0.998	0.994	0.990
Factor 2 (7 items)	0.991	0.992	0.988
Factor 3 (4 items)	0.969	0.987	0.979
Total (18 items)	0.998	0.995	0.992

Factor 1 = Interaction; Factor 2 = Person; Factor 3 = Occupational environment; ICC = interclass correlation coefficient.



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# Conclusions



There is a **limited number of specific scales** measuring occupational adaptation in individuals with schizophrenia.



In this study, a **valid and reliable scale** was developed to assess occupational adaptation in individuals with schizophrenia.



The scale includes **three subdomains: Interaction, Person, and Occupational Environment**, and is suitable for use in Türkiye.




The results indicate that the scale is grounded in the theoretical framework of the **Occupational Adaptation Model** and provides a **valid and reliable measure** of occupational adaptation in individuals with schizophrenia.



The **Cronbach's alpha value** supports the **internal consistency** of the scale.

This study has been published  
in the British Journal of Occupational  
Therapy.

You can access the full text  
by scanning the QR code.


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Research Article

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**Abstract**

**Introduction:** The aim of this study was to test the reliability and validity of OAS-S to measure occupational adaptation in schizophrenia.

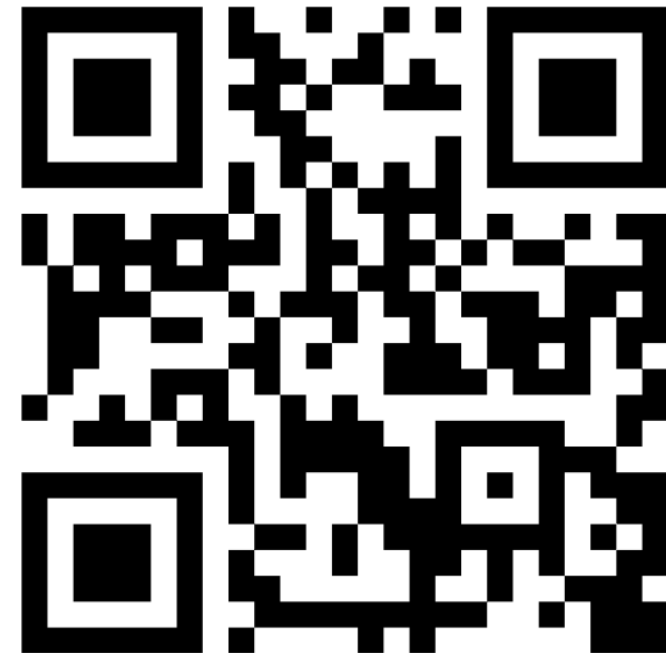
**Methods:** We used the Davis technique with 10 expert panellists and administered the scale form to 320 people. Two weeks later, we tested 80 people again. Then, we conducted item analysis to evaluate the internal consistency. We also conducted exploratory and confirmatory factor analysis to examine the structural validity.

**Findings:** The content validity index of the scale was found to be 0.895. Exploratory factor analysis showed that the scale consisting of 18 items had a three-factor structure that explained 69.925% of the variance. The model fit indices showed that the measurement model was appropriate (RMSEA = 0.045; GFI = 0.954; AGFI = 0.885; NNFI = 0.935; CFI = 0.946; NFI = 0.964; IFI = 0.973; CMIN/DF = 2.405). The results of the reliability analysis were as follows: Intraclass Correlation Coefficient = 0.995 and Cronbach's alpha = 0.998. The results showed very high and statistically significant correlation coefficients between the first and second administrations ( $r = 0.992$ ;  $p < 0.001$ ).

**Conclusion:** The OAS-S is a valid and reliable scale consisting of 18 items and 3 subscales. It consists of person, interaction, and occupational environment subdomains. We recommend further studies to validate the scale and adapt it across cultures.

**Keywords**  
Interaction, occupational adaptation, environment, person, psychometrics, schizophrenia

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Thank you for your attention 😊  
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