

# PSİKOLOJİ ALANINDA R KULLANIMI

Why R? Turkey 2021  
17/04/2021  
Eren Halil ÖZBERK



# EĞİTİM



# DENEYİM



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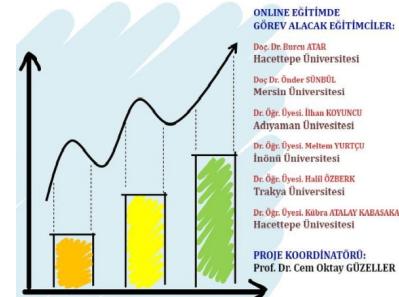


## R ile Veri Analizi ve Psikometri Uygulamaları

Burcu ATAR - Kübra ATALAY KABASAKAL  
Elif Bengi ÜNSAL ÖZBERK - Eren Halil ÖZBERK  
Nermin KIBRISLOĞLU UYSAL



TÜBİTAK-2237-A "SOSYAL BİLİMLER ve  
EĞİTİM BİLİMLERİ ALANINA YÖNELİK  
RSTUDIO İLE TEMEL İSTATİSTİK EĞİTİMİ"



## R ile İstatistiksel Uygulamalar Eğitimi

Dr. Kübra Atalay Kabasakal  
Dr. Elif Bengi Ünsal Özberk  
Dr. Eren Halil Özberk  
Dr. Nermin Kibrisloğlu Uysal

Eğitimin tüm geliri SMA hastası çocukların yardımına kullanılacak.

[R ile Veri Analizi ve Psikometri Uygulamaları](#)

Kitabının sazları: öğretim üyelerimiz

Eğitime katkı için kane kodu kullanın.

EPOD2016 Kongresi - R Yazılımına Giriş Çalıştayı

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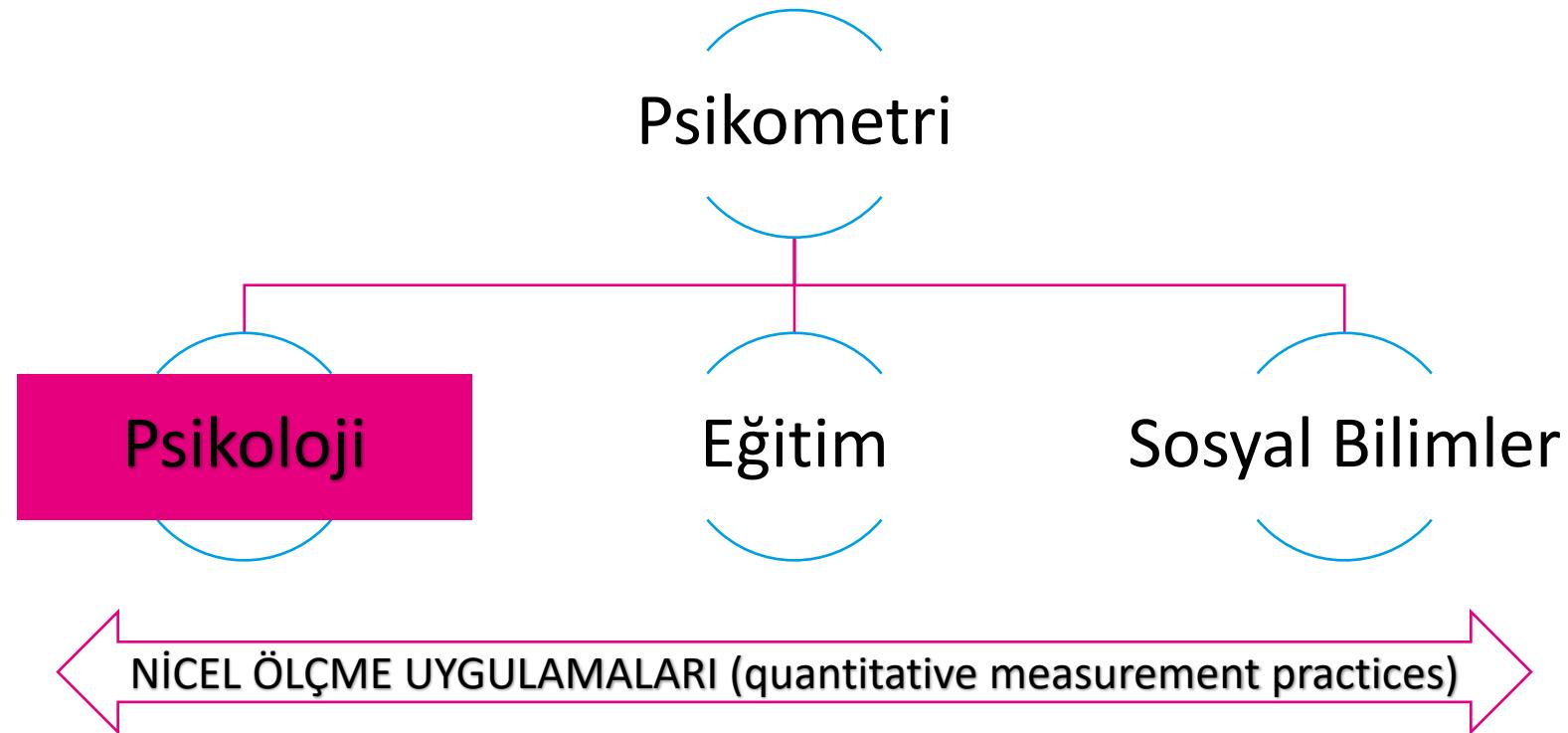
*It is rather surprising that systematic studies of human abilities were not undertaken until the second half of the last century... An accurate method was available for measuring the circumference of the earth 2,000 years before the first systematic measures of human ability were developed*

**Jum Nunnally, Psychometric Theory (1967)**

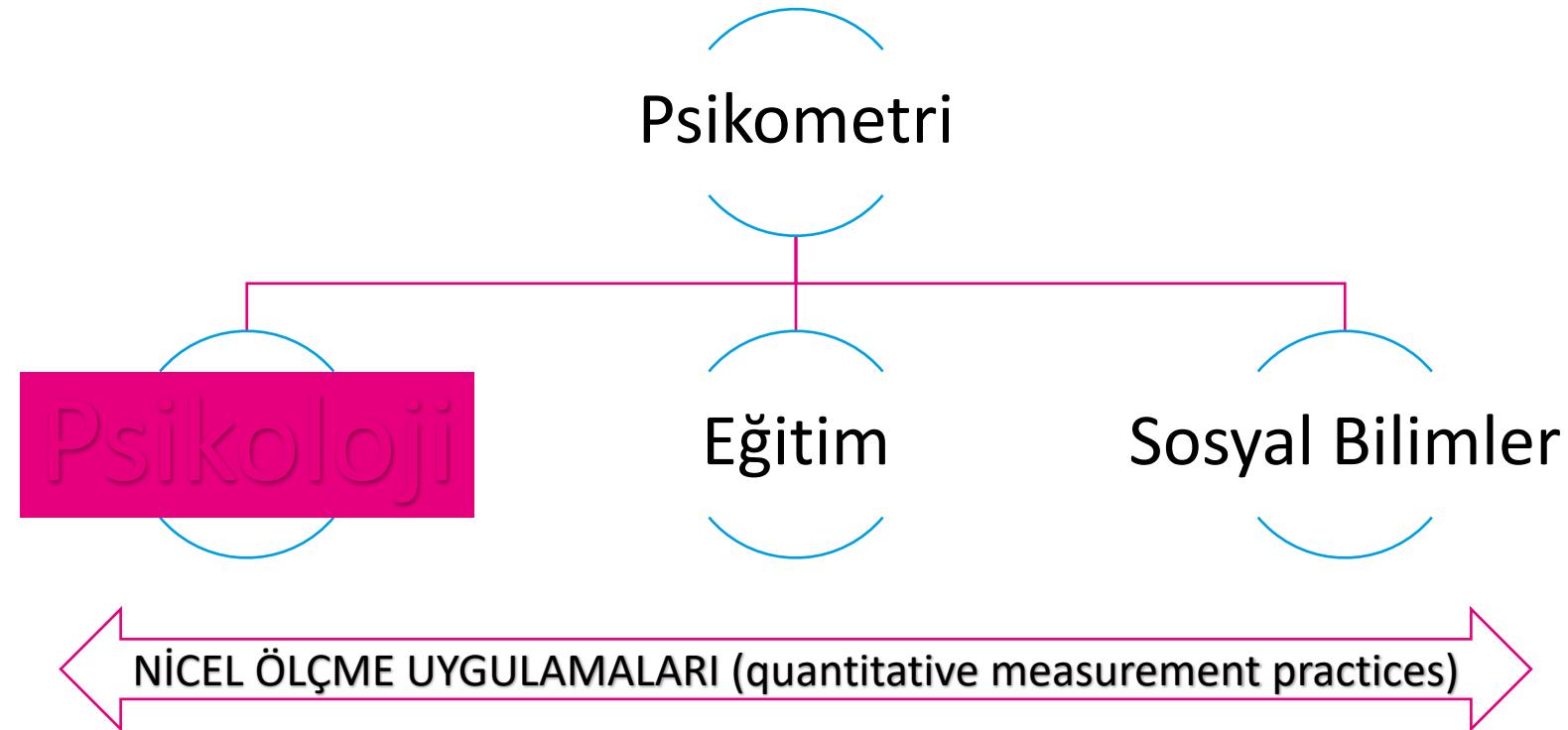
*Psychometry, it is hardly necessary to say, means the art of imposing measurement and number upon operations of the mind ...”*

**Francis Galton, “Psychometric Experiments” (1879)**

# PSİKOMETRİ NEDİR?



# PSİKOMETRİ NEDİR?



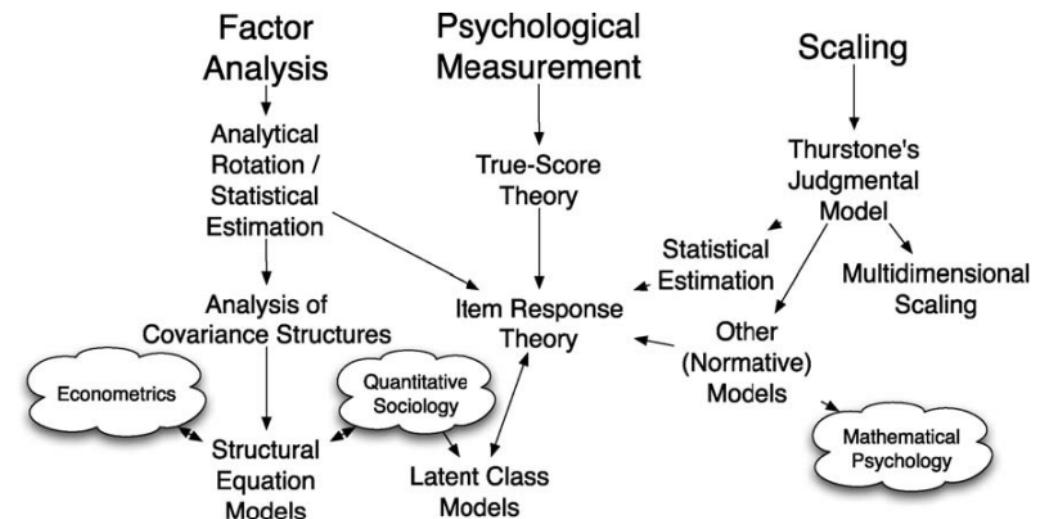
# PSİKOMETRİ NEDİR?



- Ölçme araçlarının geliştirilmesi
- Gözlenen değişkenler (Zeka testi maddeleri) ile teorik yapıların (Zeka) ilişkilendirilmesi
- Yeteneğin belirlenmesi

# HANGİ YÖNTEMLER

- Psikolojik Ölçekleme (Psychological Scaling)  
Stevens (1951) Ölçme objelere ve olayları numaralandırma anlamına gelir.  
Thurstone, bu numaralandırmayı standartlaştırmak için «scale» kavramı üzerinde duruyor.
- Psikometrik Ölçme (Psychological measurement-test theory)  
Gerçek Puanlar Teorisi (True Score Theory) – Güvenirlilik Geçerlik  
Madde Tepki Kuramı (Item Response Theory) – Rasch, Parameter based LM, GRM,PCM,NRM  
DIF, DMF Değişen madde fonksiyonu
- Faktör Analizi  
Temel Bileşenler Analizi  
Kovaryans Yapıları  
Örtük Sınıf/Profil Analizleri  
Yapısal Eşitlik Modeli
- Psikolojik İstatistikler  
Survey /Anket  
Betimsel  
Veri Görselleştirme



Jones, L. V., & Thissen, D. (2006). 1 A History and Overview of Psychometrics. *Handbook of statistics*, 26, 1-27

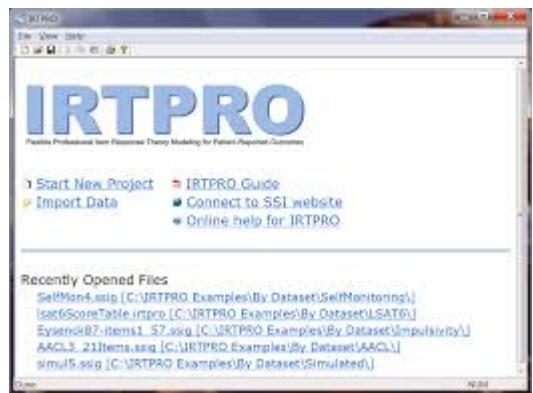
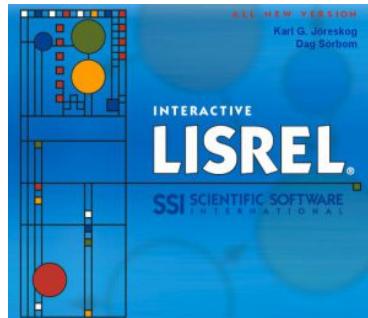
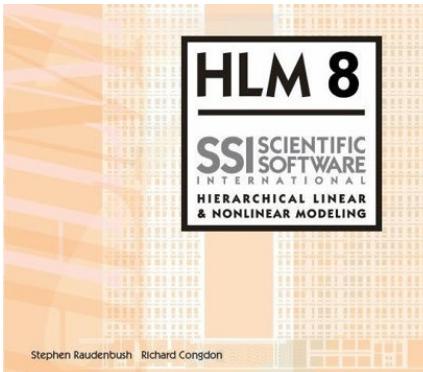
# PEKİ R BU İŞİN NERESİNDE



About



PARSCALE for Windows  
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January 2003



Mplus

sas®



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*IRT Item parameter calibration*  
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# PEKİ R BU İŞİN NERESİNDE



jMetrik

# PEKİ R BU İŞİN NERESİNDE

## Output kullanımı

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.497 <sup>a</sup>	.247	.232	20.362	.247	15.767	1	48	.000
2	.614 <sup>b</sup>	.377	.351	18.719	.130	9.796	1	47	.003
3	.680 <sup>c</sup>	.462	.427	17.587	.085	7.248	1	46	.010
4	.691	.477	.431	17.521	.016	1.344	1	45	.252
5	.695 <sup>e</sup>	.483	.424	17.631	.005	.441	1	44	.510

a. Predictors: (Constant), I have good labor conditions

b. Predictors: (Constant), I have good labor conditions, My work is interesting

c. Predictors: (Constant), I have good labor conditions, My work is interesting, My workplace is good

d. Predictors: (Constant), I have good labor conditions, My work is interesting, My workplace is good, I have nice colleagues

e. Predictors: (Constant), I have good labor conditions, My work is interesting, My workplace is good, I have nice colleagues, I have a nice supervisor

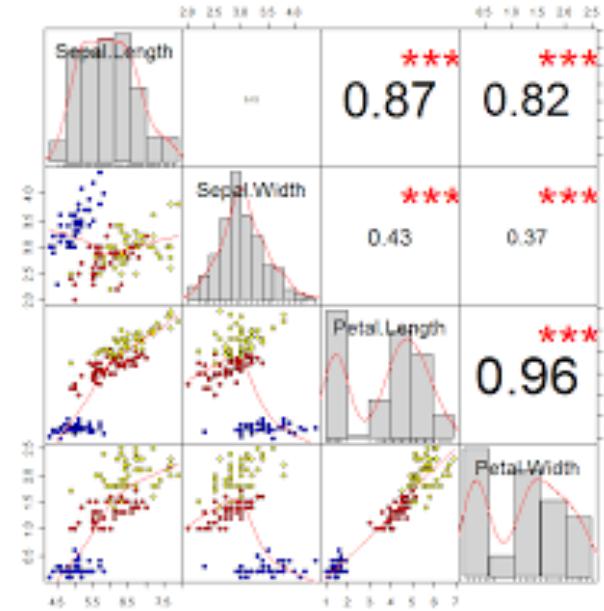
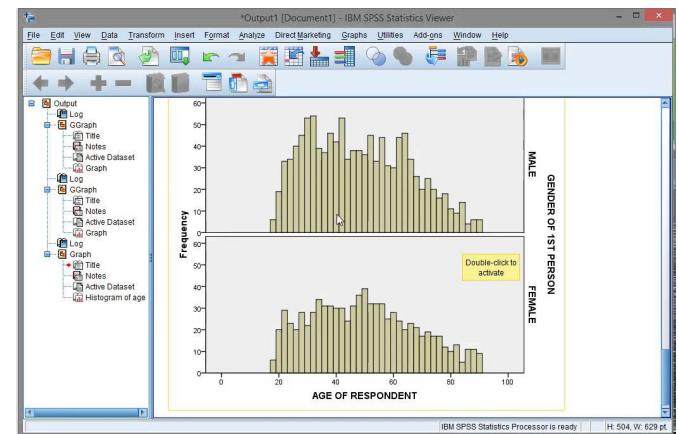
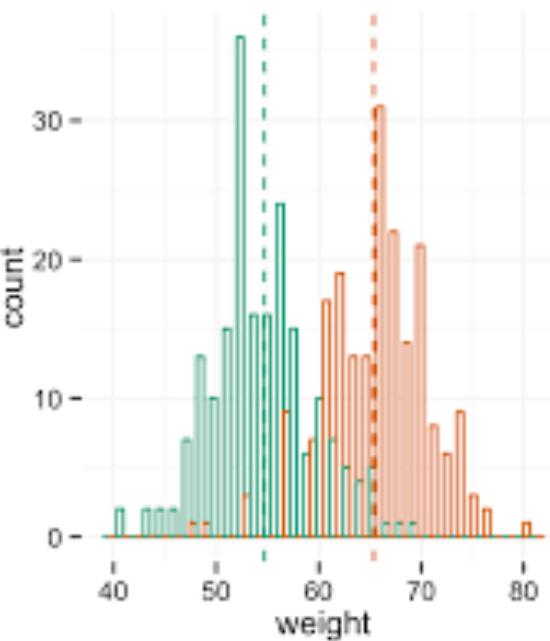
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		Wechsler IQ Test Score	Depression Test Score	Anxiety Test Score	Social Functioning Test Score	General Well Being Test Score
Wechsler IQ Test Score	Pearson Correlation	1	.121	.152	-.151	
	Sig. (2-tailed)		.194	.110	.104	
	N	122	116	112	117	
Depression Test Score	Pearson Correlation	.121	1	.282**	-.328**	
	Sig. (2-tailed)	.194		.003	.000	
	N	116	122	112	116	
Anxiety Test Score	Pearson Correlation	.152	.282**	1	-.534**	
	Sig. (2-tailed)	.110	.003		.000	
	N	112	112	117	111	
Social Functioning Test Score	Pearson Correlation	-.151	-.328**	-.534**	1	
	Sig. (2-tailed)	.104	.000	.000		
	N	117	116	111	122	
General Well Being Test Score	Pearson Correlation	-.080	-.801**	-.296**	.333**	
	Sig. (2-tailed)	.393	.000	.001	.000	
	N	117	117	113	117	

\*\*. Correlation is significant at the 0.01 level (2-tailed). © 2017 www.spss-tutorials.com

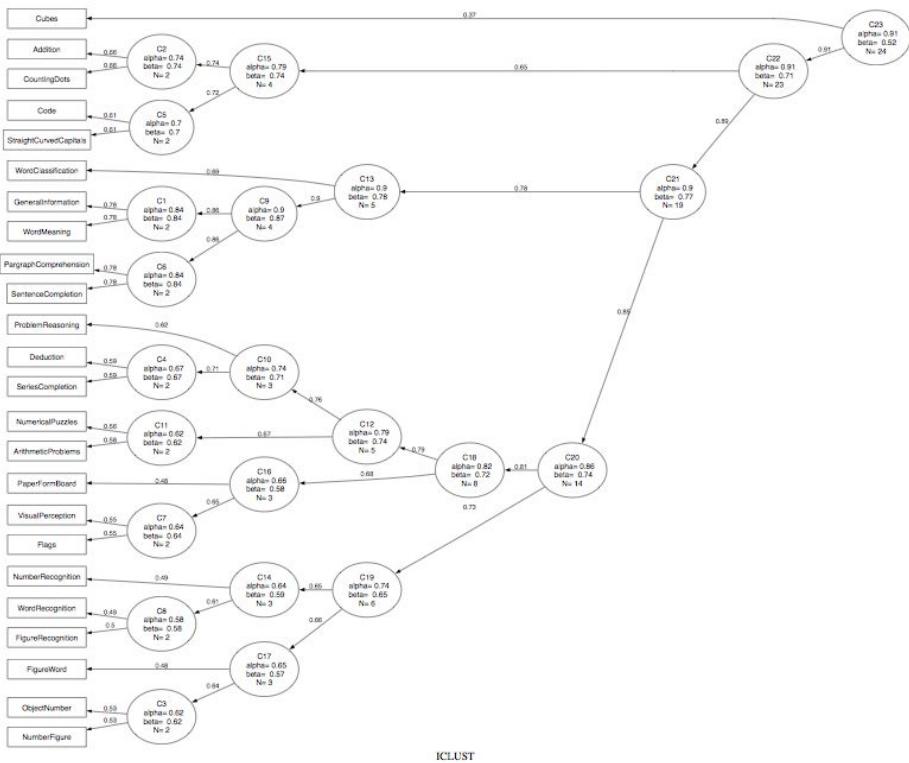
# PEKİ R BU İŞİN NERESİNDE

Output kullanımı  
Veri görselleştirme

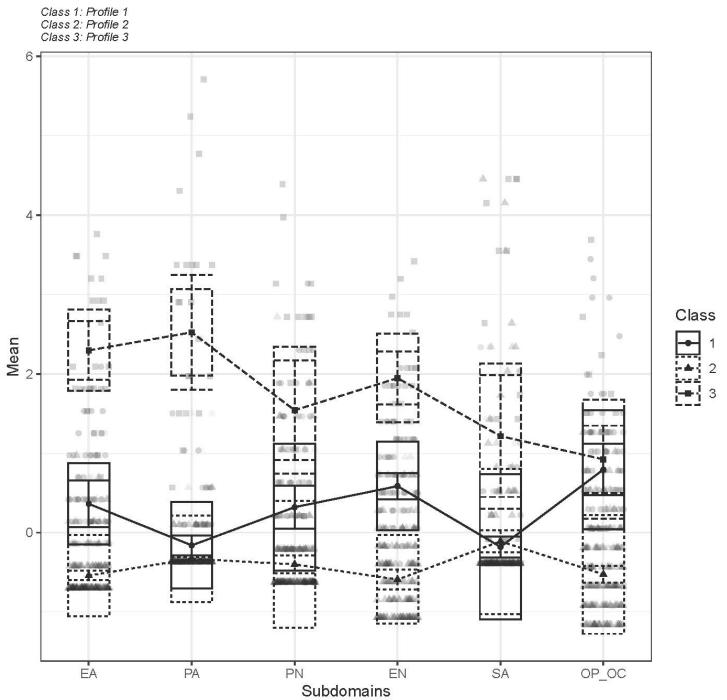


# PEKİ R BU İŞİN NERESİNDE

Output kullanımı  
Veri görselleştirme  
Psikometrik analizler

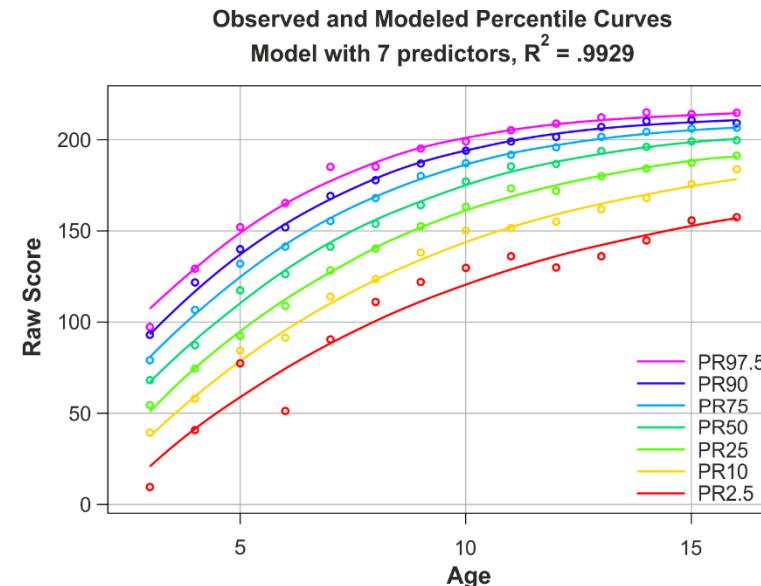
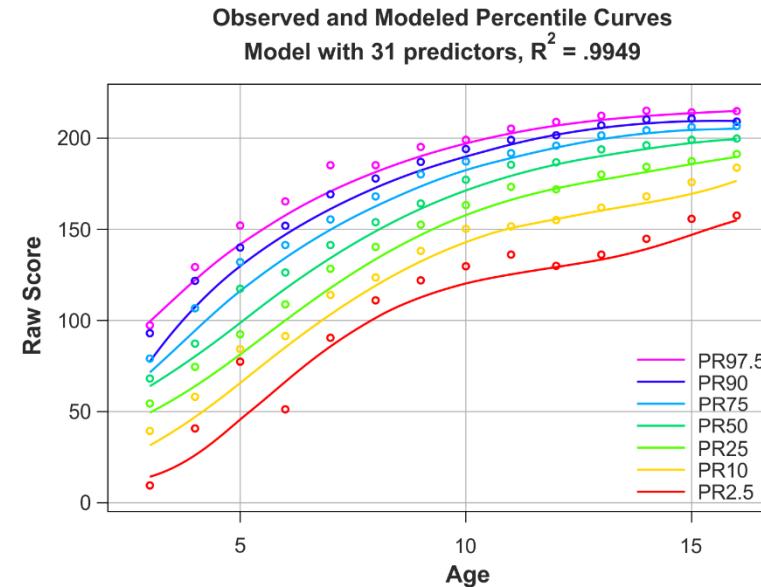


Estimated Latent Profiles for the CERQ (father)



# PEKİ R BU İŞİN NERESİNDE

- Output kullanımı
- Veri görselleştirme
- Psikometrik analizler
- Yaş Normları



# PEKİ R BU İŞİN NERESİNDE

Output kullanımı

Veri görselleştirme

Psikometrik analizler

Yaş Normları

Denklemlerin Kontrolü

The equation for the three-parameter model is:

$$P(\theta) = c + (1 - c) \frac{1}{1 + e^{-a(\theta-b)}}$$

where:  $b$  is the difficulty parameter  
 $a$  is the discrimination parameter  
 $c$  is the guessing parameter and  
 $\theta$  is the ability level

```
irf <- function( theta = 0      # ability parameter
                  ,a = 1        # item discrimination
                  ,b = 0        # item difficulty
                  ,cc = 0       # guessing parameter
                  ,type = "3pl"){
  if (type == "3pl"){
    prob <- cc+(1-cc)/(1+exp(-a*(theta-b)))
  }
  if (type == "norm"){
    prob <- cc+(1-cc)*pnorm(a*(theta-b))
  }
  return(prob)
}
```



```

1 # Notice the function returns whatever variable is at the end
2
3 # Skipper tells how many lines to skip at the top of a file
4 readParscale <- function(file_and_path, skipper){
5
6   #Line lengths 77, 20, 20
7   IRTPars <- read.fwf(file_and_path,
8     width=list(c(7,-13,7,-3,7,-2,8,-3,7,-4,7,-2,7),c(-2,8,-2,8,-2,8),c(-1)), skip=skipper,
9     col.names=c("ItemID", "slope", "slopeSE",
10      "loc", "locSE", "guess", "guessSE", "loc1", "loc2", "loc3"), as.is=T)
11 IRTPars
12 }
13
14 readParscale("RN.par",9)
15
16
17 #
18 # An improvement to automatically determine the number of skip lines
19 #
20
21 readParscale <- function(file_and_path){
22
23   FindSkip <- read.fwf(file_and_path,8,as.is=TRUE)
24   FindSkip <- FindSkip == "GROUP 01"
25   FindSkip <- order(FindSkip,decreasing=TRUE) [1]
26
27   #Line lengths 77, 20, 20
28   IRTPars <- read.fwf(file_and_path,
29     width=list(c(7,-13,7,-3,7,-2,8,-3,7,-4,7,-2,7),c(-2,8,-2,8,-2,8),c(-1)), skip=FindSkip,
30     col.names=c("ItemID", "slope", "slopeSE",
31      "loc", "locSE", "guess", "guessSE", "loc1", "loc2", "loc3"), as.is=T)
32 IRTPars
33 }
```

# PSİKOLOJİNİN ÇALIŞMA ALANLARI (PSİKOLOJİ ÖZELİNDE)



- Örgütsel
- Davranış Bilimleri
- Nöropsikoloji
- Klinik
- Sosyal



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<https://doi.org/10.21449/ijate.728362>

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*Research Article*

## Examining the Dimensionality and Monotonicity of an Attitude Dataset based on the Item Response Theory Models

Seval Kula Kartal <sup>1,\*</sup>, Ezgi Mor Dirlik  



**International Journal of Assessment Tools in Education**

2020, Vol. 7, No. 1, 18–29

<https://dx.doi.org/10.21449/ijate.629584>

Published at <http://www.ijate.net>

<http://dergipark.org.tr/en/pub/ijate>

*Research Article*

## Use of Item Response Theory to Validate Cyberbullying Sensibility Scale for University Students

**Osman Tolga Arıçak <sup>1</sup>, Akif Avcu <sup>2,\*</sup>, Feyza Topçu <sup>1</sup>, Merve Gülçin Tutlu <sup>1</sup>**

Psychological Methods  
2003, Vol. 8, No. 2, 164–184

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1082-989X/03/\$12.00 DOI: 10.1037/1082-989X.8.2.164

## How Many IRT Parameters Does It Take to Model Psychopathology Items?

Steven P. Reise  
University of California, Los Angeles

Niels G. Waller  
Vanderbilt University

The authors compared the fit of the 2- and 3-parameter logistic models (2PLM; 3PLM) on 15 unidimensional factor scales derived from the Minnesota Multiphasic Personality Inventory—Adolescent item pool. Log-likelihood chi-square deviance tests indicated that a 3PLM provided an improved fit. However, residual statistics indicated that the difference in fit between the 2 models was negligible. An unexpected finding was that from 10% to 30% of the items had substantial lower asymptote parameters ( $c \geq .10$ ) when the scales were scored in the pathology or nonpathology directions. The authors argue that the large lower asymptote param-

## Article

# A Demonstration of Mokken Scale Analysis Methods Applied to Cognitive Test Validation Using the Egyptian WAIS-IV

Journal of Psychoeducational Assessment  
1–14  
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DOI: 10.1177/0734282919862144  
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Gomaa S. M. Abdelhamid<sup>1,2</sup> , Juana Gómez-Benito<sup>1</sup> ,  
Ahmed T. M. Abdeltawwab<sup>2</sup>, Mostafa H. S. Abu Bakr<sup>2</sup>,  
and Amina M. Kazem<sup>3</sup>

## Abstract

The fourth edition of the Wechsler Adult Intelligence Scale (WAIS-IV) has been used extensively for assessing adult intelligence. This study uses Mokken scale analysis to investigate the psychometric proprieties of WAIS-IV subtests adapted for the Egyptian population in a sample of 250 adults between 18 and 25 years of age. The monotone homogeneity model and the double monotonicity model were consistent with the subtest data. The items of all subtests except Matrix Reasoning, Information, Similarities, and Vocabulary formed a unidimensional scale. The WAIS-IV subtests have discriminatory and invariantly ordered items, although some items violated the invariant item ordering and scalability criteria. Therefore, the WAIS-IV subtests—with the exception of some items—are hierarchical scales that allow items to be

## Application of the Double Monotonicity Model to Polytomous Items

Scalability of the Beck Depression Items on Subjects with Eating Disorders

Teresa Rivas, Rosa Bersabé, and Carmen Berrocal

Facultad de Psicología, Universidad de Málaga, Spain

**Abstract.** This paper investigates the item scalability of the Beck Depression Inventory (BDI) in 252 subjects; 126 with and 126 without eating disorders. To do so, an order was established regarding the BDI items according to the clinical characteristics of the subjects with eating disorders. The nonparametric Item Response Theory (NIRT) model was applied to evaluate Monotone Homogeneity and Double Monotonicity of items, as well as the reliability of the scale in both groups. The results show that the order of the items is satisfied in the group with eating disorders, but not in the control group. Therefore, the results obtained allow the ordering of depression scores of subjects with eating disorders according to their clinical characteristics. This order is not valid for the depression scores of subjects who did not have eating disorders. It should be noted that the application of the Double Monotonicity model to polytomous items provides new and relevant information when compared to the data provided by the Classical Test Model. In addition, it is very useful for other items and subjects having certain characteristics.

*Article*

# Exploratory Mokken Scale Analysis as a Dimensionality Assessment Tool: Why Scalability Does Not Imply Unidimensionality

Applied Psychological Measurement  
36(6) 516–539

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DOI: 10.1177/0146621612451050  
<http://apm.sagepub.com>



Iris A. M. Smits<sup>1</sup>, Marieke E. Timmerman<sup>1</sup>, and Rob R. Meijer<sup>1</sup>

Personality and Individual Differences 91 (2016) 89–97



Contents lists available at ScienceDirect

## Personality and Individual Differences

journal homepage: [www.elsevier.com/locate/paid](http://www.elsevier.com/locate/paid)



## Psychometric qualities of the Thought Suppression Inventory-Revised in different age groups



Kevin van Schie <sup>a,b,\*<sup>1</sup></sup>, Sabine Wanmaker <sup>b</sup>, Iris Yocarini <sup>b</sup>, Samantha Bouwmeester <sup>b</sup>

<sup>a</sup> Clinical Psychology, Utrecht University, PO Box 80140, NL-3508 TC Utrecht, The Netherlands

<sup>b</sup> Institute of Psychology, Erasmus University Rotterdam, PO Box 1738, 3000 DR Rotterdam, The Netherlands

- **psych: Procedures for Psychological, Psychometric, and Personality Research**
- A general-purpose toolbox for personality, psychometric theory and experimental psychology. Functions are primarily for multivariate analysis and scale construction using factor analysis, principal component analysis, cluster analysis and reliability analysis, although others provide basic descriptive statistics. Item Response Theory is done using factor analysis of tetrachoric and polychoric correlations. Functions for analyzing data at multiple levels include within and between group statistics, including correlations and factor analysis. Functions for simulating and testing particular item and test structures are included. Several functions serve as a useful front end for structural equation modeling. Graphical displays of path diagrams, factor analysis and structural equation models are created using basic graphics.
- **NetworkToolbox: Methods and Measures for Brain, Cognitive, and Psychometric Network Analysis**
- Implements network analysis and graph theory measures used in neuroscience, cognitive science, and psychology. Aims to provide researchers with state-of-the-art methods and measures for estimating and analyzing brain, cognitive, and psychometric networks.

- **psychometric**: Applied Psychometric Theory
- Contains functions useful for correlation theory, meta-analysis (validity-generalization), reliability, item analysis, inter-rater reliability, and classical utility
- **lavaan**: Latent Variable Analysis
- Fit a variety of latent variable models, including confirmatory factor analysis, structural equation modeling and latent growth curve models.
- **sem**: Structural Equation Models
- Functions for fitting general linear structural equation models (with observed and latent variables) using the RAM approach, and for fitting structural equations in observed-variable models by two-stage least squares.
- **cNORM**: Continuous Norming
- Conventional methods for producing standard scores in psychometrics or biometrics are often plagued with "jumps" or "gaps" (i.e., discontinuities) in norm tables and low confidence for assessing extreme scores.

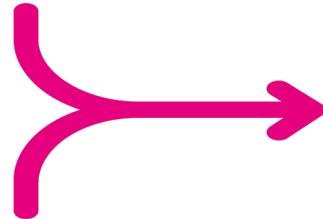
# UYGULAMA - WECHSLER ADULT INTELLIGENCE SCALE-REVISED (WAIS-R)



- McArdle and Prescott (1992, p.90) verisi
  - IN information
  - CO comprehension
  - SI similarities
  - VO vocabulary
  - PC picture completion
  - BD block design
  - PA picture arrangement
  - OA object assembly
- Arithmetic, Memory Span for Digits, ve Digit Symbol Substitution dışında tutulmuştur.

- McArdle and Prescott (1992, p.90) verisi

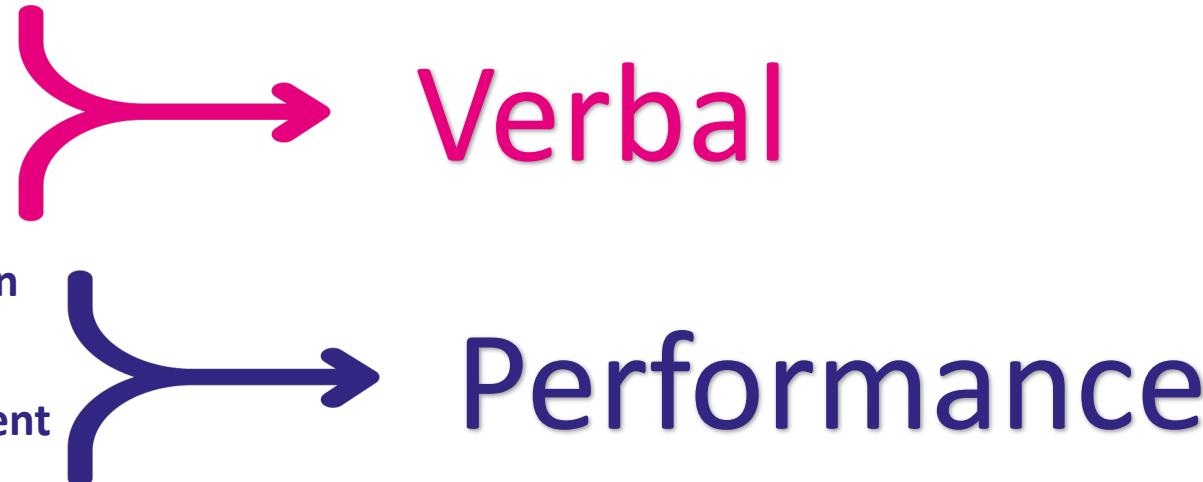
- IN information
- CO comprehension
- SI similarities
- VO vocabulary



## Verbal

- PC picture completion
  - BD block design
  - PA picture arrangement
  - OA object assembly
- 
- Arithmetic, Memory Span for Digits, ve Digit Symbol Substitution dışında tutulmuştur.

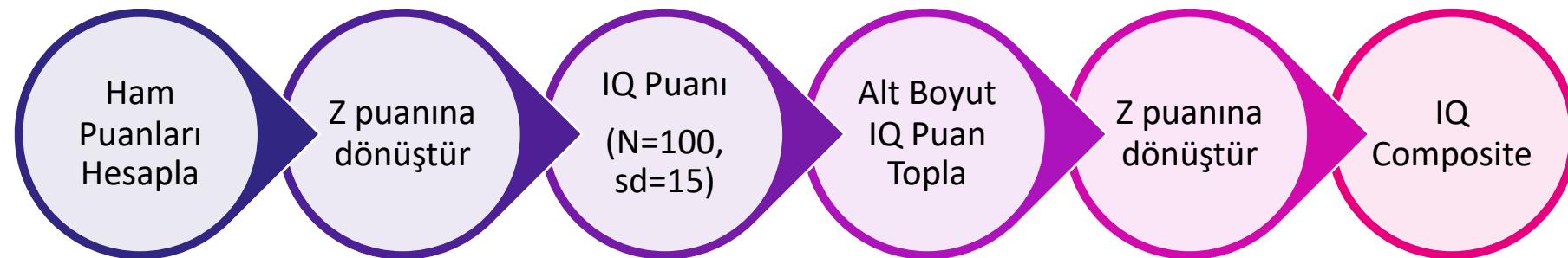
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- Arithmetic, Memory Span for Digits, ve Digit Symbol Substitution dışında tutulmuştur.



# UYGULAMA - WECHSLER ADULT INTELLIGENCE SCALE-REVISED (WAIS-R)



- WAIS Zeka Puanı Hesaplama Yöntemi,





**WAIS RECORD FORM**  
Wechsler Adult Intelligence Scale

Name \_\_\_\_\_ Birth Date \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_ Marital: S M D W  
NO. DAY YR. CIRCLE ONE  
Nat. \_\_\_\_\_ Color \_\_\_\_\_ Tested by \_\_\_\_\_

Occupation \_\_\_\_\_ Place of Examination \_\_\_\_\_ Date \_\_\_\_\_  
Education \_\_\_\_\_

TABLE OF SCALED SCORE EQUIVALENTS*												
Scaled Score	RAW SCORE											
	Information	Comprehension	Arithmetic	Similarities	Digit Span	Vocabulary	Digit Symbol	Picture Completion	Block Design	Picture Arrangement	Object Assembly	Scaled Score
19	29	27-28	26	17	78-80	87-90						19
18	28	26	25	17	76-77	83-86	21					18
17	27	25	18	24	74-75	79-82	48	36	44	43	17	
16	26	24	17	23	16	71-73	76-78	20	47	34	42	16
15	25	23	16	22	15	67-70	72-75	46	33	41	41	15
14	23-24	22	15	21	14	63-66	69-71	19	44-45	32	40	14
13	21-22	21	14	19-20	11	59-62	66-68	18	42-43	30-31	38-39	13
12	19-20	20	13	17-18	13	54-58	62-65	17	39-41	28-29	36-37	12
11	17-18	19	12	15-16	12	47-53	58-61	15-16	35-38	26-27	34-35	11
10	15-16	17-18	11	13-14	11	40-46	52-57	14	31-34	23-25	31-33	10
9	13-14	15-16	10	11-12	10	32-39	47-51	12-13	28-30	20-22	28-30	9
8	11-12	14	9	9-10	9	26-31	41-46	10-11	25-27	18-19	25-27	8
7	9-10	12-13	7-8	7-8	9	22-25	45-50	8-9	21-24	15-17	22-24	7
6	7-8	10-11	6	5-6	8	18-21	29-34	6-7	17-20	12-14	19-21	6
5	5-6	8-9	5	4	7	14-17	23-28	5	13-16	9-11	15-18	5
4	4	6-7	4	3	7	11-13	18-22	4	10-12	8	11-14	4
3	3	5	3	2	10	15-17	3	6-9	7	8-10	3	
2	2	4	2	1	6	9	13-14	2	3-5	6	5-7	2
1	1	3	1	1	5	4-5	8	12	1	2	5	3-4
0	0	0-2	0	0	0-3	0-7	0-11	0	0-1	0-4	0-2	0

\*Clinicians who wish to draw a "psychograph" on the above table may do so by connecting the subject's raw scores. The interpretation of any such profile, however, should take into account the reliabilities of the subtests and the lower reliabilities of differences between subtest scores.

I. INFORMATION		SCORE 1 or 0	II. HEIGHT		SCORE 1 or 0	III. CLOTHES		SCORE 1 or 0	IV. WASHINGTON		SCORE 1 or 0	V. HAMLET		SCORE 1 or 0	VI. VATICAN		SCORE 1 or 0	VII. PARIS		SCORE 1 or 0	VIII. EGYPT		SCORE 1 or 0	IX. YEAST		SCORE 1 or 0	X. POPULATION		SCORE 1 or 0
1. Flag	2. Ball		11. Height	12. Italy		21. Senators	22. Genesis		23. Temperature	24. Iliad		25. Blood vessels	26. Koran		27. Faust	28. Ethnology		29. Apocrypha											
3. Months	4. Thermometer		13. Clothes	14. Washington		15. Hamlet	16. Vatican		17. Paris	18. Egypt		19. Yeast	20. Population																
5. Rubber	6. Presidents		10. Brazil	11. Longfellow		12. Italy	13. Clothes		14. Washington	15. Hamlet		16. Vatican	17. Paris		18. Egypt	19. Yeast		20. Population											
7. Longfellow	8. Weeks		9. Panama	10. Brazil		11. Height	12. Italy		13. Clothes	14. Washington		15. Hamlet	16. Vatican		17. Paris	18. Egypt		19. Yeast	20. Population										

OBSERVATIONS:

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**Table 1**  
*Conversion Table for Calculating Performance IQ When Symbol Search is Substituted for Coding on the WISC-III*

Sum of scaled scores	IQ	Percentile rank	Confidence intervals		Sum of scaled scores	IQ	Percentile rank	Confidence intervals	
			90%	95%				90%	95%
5	44		42–56	41–57	51	102	55	95–109	94–110
6	46	< 0.1	44–58	43–59	52	103	58	95–109	95–111
7	47	< 0.1	45–58	44–60	53	104	61	97–110	96–112
8	48	< 0.1	46–59	45–61	54	105	66	98–111	96–112
9	49	< 0.1	47–60	45–62	55	107	68	100–113	98–114
10	51	0.1	49–62	47–63	56	108	70	101–114	99–115
11	52	0.1	49–63	48–65	57	109	75	101–115	100–116
12	53	0.1	50–64	49–65	58	110	77	102–116	101–117
13	54	0.1	51–65	50–66	59	112	79	104–118	103–119
14	56	0.2	53–67	52–68	60	113	81	105–119	104–120
15	57	0.3	54–68	53–69	61	114	84	106–119	105–121
16	58	0.3	55–68	54–70	62	115	86	107–120	106–122
17	59	0.4	56–69	55–71	63	116	87	108–121	106–122
18	61	1	58–71	56–72	64	118	90	110–123	108–124
19	62	1	59–72	57–73	65	119	91	110–124	109–125
20	63	1	60–73	58–74	66	120	92	111–125	110–126
21	64	1	60–74	59–75	67	121	94	113–127	112–128
22	66	1	62–76	61–77	68	123	95	114–127	112–129
23	67	2	63–77	62–78	69	124	96	115–128	114–130
24	68	2	64–78	63–79	70	125	96	116–129	115–131
25	69	2	65–78	64–80	71	126	97	117–130	115–131
26	71	3	67–80	66–82	72	128	98	119–132	117–132
27	72	3	68–81	66–83	73	129	98	119–133	118–134
28	73	4	69–82	67–83	74	130	98	120–134	119–135
29	74	4	70–83	68–84	75	131	99	121–135	120–136
30	76	5	72–85	70–86	76	133	99	123–137	122–138
31	77	6	72–86	71–87	77	134	99	124–137	123–139
32	78	7	73–87	72–88	78	135	99	125–138	124–140
33	79	8	74–88	73–89	79	136	99.5	126–139	124–141
34	80	9	75–89	74–90	80	138	99.6	128–141	126–142
35	82	10	77–90	76–92	81	139	99.7	129–142	127–143
36	82	12	78–91	77–93	82	140	99.7	129–143	128–144
37	83	13	79–92	78–94	83	141	99.8	130–144	129–145
38	84	14	80–93	78–94	84	143	99.9	132–146	131–147
39	85	18	82–95	80–96	85	144	99.9	133–147	132–148
40	87	19	82–96	81–97	86	145	99.9	134–148	133–149
41	89	23	83–97	82–98	87	146	99.9	135–148	134–150
42	90	25	84–98	83–99	88	147	> 99.9	136–149	134–151
43	92	27	86–100	85–101	89	149	> 99.9	138–151	136–152
44	93	32	87–100	86–102	90	150	> 99.9	139–152	137–153
45	94	34	88–101	87–103	91	151	> 99.9	139–153	138–154
46	95	37	89–102	87–103	92	152	> 99.9	140–154	139–155
47	97	39	91–104	88–104	93	154	> 99.9	142–156	141–157
48	98	45	91–105	90–106	94	155	> 99.9	143–157	142–158
49	99	47	92–106	91–107	95	156	> 99.9	144–159	143–159
50	100	50	93–107	92–108					

*Note.* WISC-III = Wechsler Intelligence Scale for Children—III.

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# TEŞEKKÜRLER



LEIBNIZ INSTITUTE FOR  
EDUCATIONAL TRAJECTORIES

Wilhelmsplatz 3  
96047 Bamberg | Germany

[www.lifbi.de](http://www.lifbi.de)

Dr. Eren Halil Özberk

Phone: +49 951 863-3420  
[eren.ozberk@lifbi.de](mailto:eren.ozberk@lifbi.de)

