

THE RELATIONSHIP BETWEEN KEY INDIVIDUAL PSYCHOLOGICAL
RESOURCES AND PSYCHOLOGICAL WELL-BEING: A META-ANALYSIS
STUDY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

AYŞEGÜL ARACI-İYİAYDIN

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
IN
THE DEPARTMENT OF EDUCATIONAL SCIENCES, GUIDANCE AND
PSYCHOLOGICAL COUNSELING

AUGUST 2024

Approval of the thesis:

**THE RELATIONSHIP BETWEEN KEY INDIVIDUAL PSYCHOLOGICAL
RESOURCES AND PSYCHOLOGICAL WELL-BEING: A META-ANALYSIS
STUDY**

submitted by **AYŞEGÜL ARACI-İYİAYDIN** in partial fulfillment of the
requirements for the degree of **Doctor of Philosophy in Educational Sciences,
Guidance and Psychological Counseling**, the Graduate School of Social Sciences
of **Middle East Technical University** by,

Prof. Dr. Sadettin KİRAZCI
Dean
Graduate School of Social Sciences

Prof. Dr. Zeynep SÜMER
Head of Department
Department of Educational Sciences

Prof. Dr. Zeynep SÜMER
Supervisor
Department of Educational Sciences

Examining Committee Members:

Prof. Dr. Oya GÜNERİ (Head of the Examining Committee)
TED University
Department of Educational Sciences

Prof. Dr. Zeynep SÜMER (Supervisor)
Middle East Technical University
Department of Educational Sciences

Assoc. Prof. Dr. Yeşim ÇAPA AYDIN
Middle East Technical University
Department of Educational Sciences

Assoc. Prof. Dr. Gülfem ÇAKIR ÇELEBİ
Akdeniz University
Department of Educational Sciences

Assoc. Prof. Dr. Tolga ERDOĞAN
TED University
Department of Educational Sciences



I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: Ayşegül ARACI-İYİAYDIN

Signature:

ABSTRACT

THE RELATIONSHIP BETWEEN KEY INDIVIDUAL PSYCHOLOGICAL RESOURCES AND PSYCHOLOGICAL WELL-BEING: A META-ANALYSIS STUDY

ARACI-İYİAYDIN, Ayşegül

Ph.D., The Department of Educational Sciences, Guidance and Psychological
Counseling

Supervisor: Prof. Dr. Zeynep SÜMER

August 2024, 227 pages

The main purpose of this meta-analysis was to investigate the extent of the relationship between key individual psychological resources (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence) and psychological well-being. In addition, subgroup analyses based on the type of key individual psychological resources in relation to psychological well-being were also examined within the scope of this meta-analysis. The descriptive part included the year that the study was published, the sample size, gender distribution of the participants, age group of the participants (university students versus others), country of origin of the study participants, the type of key individual psychological resource, the scale used to measure key individual psychological resource, the type of Psychological Well-Being Scales used (adaptation or original), and Hofstede scores of six cultural dimensions (power distance, individualism, motivation towards achievement and success, uncertainty tolerance, long term orientation, and indulgence). Two hundred and fifty-one effect sizes were derived from 170 primary studies selected for the meta-analysis

based on the inclusion criteria. The random effects model was used to compute effect sizes for both main group and subgroup analyses. For the main, subgroup, and moderator analyses, three-level meta-analyses using the R program, and two-level meta-analyses using the CMA program were conducted. The results clearly showed that there is a significant association between key individual psychological resources and psychological well-being, with an overall large effect size of 0.589. More specifically, resilience (0.587), hope (0.559), optimism (0.530), self-esteem (0.643), self-efficacy (0.540), self-control (0.431), and sense of coherence (0.676) are significantly associated with large and medium to large effect sizes on the psychological well-being of individuals (excluding children and adolescents). To explore heterogeneity among the effect sizes, the publication year of the study, sample size, age group of the participants, country of origin of the participants, version of the PWB Scales used, frequency of the usage of the scales used to assess key individual psychological resources, and Hofstede's six cultural dimensions were tested as potential moderators. Four significant moderators were found as sample size, frequency of the usage of scale for the assessment of key individual psychological variables, country of origin of the participants, and Hofstede's three cultural dimensions (individualism, long-term orientation, and indulgence) in the relationship between some of the key individual psychological resources (hope, optimism, self-control, and sense of coherence) and psychological well-being. The results were discussed in detail in line with the current literature.

Keywords: Meta-Analysis, Psychological Well-Being, Key Individual Psychological Resources

ÖZ

TEMEL BİREYSEL PSİKOLOJİK KAYNAKLARIN PSİKOLOJİK İYİ OLUŞ İLE İLİŞKİSİ: BİR META-ANALİZ ÇALIŞMASI

ARACI-İYİAYDIN, Ayşegül

Doktora, Eğitim Bilimleri, Rehberlik ve Psikolojik Danışmanlık ABD

Tez Yöneticisi: Prof. Dr. Zeynep SÜMER

Ağustos 2024, 227 sayfa

Bu meta-analiz çalışmasının ana amacı, temel bireysel psikolojik kaynaklar (psikolojik sağlamlık, umut, iyimserlik, öz saygı, öz yeterlik, öz kontrol ve bütünlük duygusu) ile psikolojik iyi oluş arasındaki ilişkinin boyutunu araştırmaktır. Ayrıca, her bir temel bireysel psikolojik kaynağın psikolojik iyi oluş ile ilişkisinin boyutu da bu meta-analiz çalışması kapsamında incelenmiştir. Çalışmanın betimleyici kısmında meta-analize dahil edilen araştırmaların yayımlanma tarihi, örneklem büyüklüğü, katılımcıların yaş ortalaması ve/veya yaş aralığı, özellikleri (üniversite öğrencisi ve diğer gruplar), cinsiyet dağılımı, köken ülkesi, Hofstede'nin altı boyuttan oluşan kültürel boyutları (güç mesafesi, bireysellik, başarıya yönelik motivasyon, belirsizlikten kaçınma, uzun vadeli yönelim ve hoşgörü), araştırmada kullanılan temel bireysel psikolojik kaynağın türü ve bu psikolojik kaynağı hangi ölçme aracı ile ölçtüğü, kullanılan psikolojik iyi oluş ölçeğinin uyarlama ya da orijinal olması yer almıştır. Meta-analize dâhil edilme kriterleri çerçevesinde yapılan taramalar sonucunda 170 ana çalışmadan 251 etki büyüklüğü elde edilmiştir. Hem ana meta-analizde, hem de alt gruplar bazında yapılan meta-analizlerde etki büyüklüklerinin hesabında rastgele etkiler modeli kullanılmıştır. Etki büyüklüklerinin ana ve alt grup bazındaki ilişki ve düzenleyici değişken

analizlerinde iki (CMA programı kullanılarak) ve üç boyutlu meta-analiz (R programı kullanılarak) yöntemleri kullanılmıştır. Ana grup meta-analiz sonucu, temel bireysel psikolojik kaynaklar ile psikolojik iyi oluş arasında istatistiksel olarak anlamlı ve büyük düzeyde etki büyüklüğünde (0.589) bir ilişki olduğunu açıkça göstermiştir. Alt grup meta-analizlerinin sonuçlarına göre psikolojik sağlamlık (0.587), umut (0.559), iyimserlik (0.530), öz saygı (0.643), öz yeterlik (0.540), öz kontrol (0.431) ve bütünlük duygusu (0.676) ile bireylerin (çocuklar ve ergenler hariç) psikolojik iyi oluşları arasında orta düzeyde etki büyüklüğünde ve anlamlı bir ilişki gözlenmiştir. Etki büyüklükleri arasındaki çeşitliliğin kaynaklarını araştırmak amacıyla çalışmanın yayımlanma tarihi, örneklem büyüklüğü, katılımcıların yaş grubu, katılımcıların köken ülkeleri, Psikolojik İyi Oluş Ölçekleri'nin türü, temel bireysel psikolojik kaynakların ölçümünde kullanılan ölçeklerin kullanım sıklığı ve Hofstede'nin altı kültürel boyutu olmak üzere altı farklı düzenleyici değişkenin olası etkisi araştırılmıştır. Yapılan düzenleyici değişken analizlerinde bazı temel bireysel psikolojik kaynaklar (umut, iyimserlik, öz kontrol ve bütünlük duygusu) ile psikolojik iyi oluş arasındaki ilişkinin, örneklem büyüklüğü, temel bireysel psikolojik kaynakların ölçümünde kullanılan ölçeklerin kullanım sıklığı, katılımcıların köken ülkeleri ve Hofstede'nin üç kültürel boyutuna (bireycilik, uzun vadeli yönelim ve hoşgörü) göre farklılaştığı görülmüştür. Çalışmanın bulguları güncel alan yazın doğrultusunda tartışılmıştır.

Anahtar Kelimeler: Meta-Analiz, Psikolojik İyi Oluş, Temel Bireysel Psikolojik Kaynaklar

*To my baby, without whom, nothing in my life would be as meaningful as it is now;
My lovely son Ömer İyiaydın...*

To my life partner, my companion, my husband Barış...

To my dear mom...

ACKNOWLEDGMENTS

Writing this thesis was a journey filled with contrasts: it was very easy, very difficult, very boring, and very enjoyable. While writing this thesis, I felt very excited, very fed up, very tired, very patient, very sad, and very hopeful. While writing this thesis, I dreamed a lot, experienced many depressive moments, felt very helpless, felt very supported, fell into a void, and believed that I was doing a very meaningful job. As with every relationship, I experienced various emotions in my relationship with my thesis. Of course, there were also things that have not changed from the beginning; My thesis advisor, Prof. Dr. Zeynep Hatipoğlu-Sümer, her unending support and patience from the process of deciding on my thesis topic to the time I completed my thesis, her incredibly meticulous feedback, astonishing attention to details, and the gratitude I will feel towards her forever.

My thesis monitoring committee and jury members, Prof. Dr. Oya Yerin Güneri and Associate Professor Dr. Yeşim Çapa-Aydın, accompanied us on this journey alongside my dear Professor Zeynep. There were times when they put more thought into it than we did and made our path better. It was also very nice to meet my jury member, Associate Professor Dr. Gülfem Çakır-Çelebi, and receive her valuable feedback.

Associate Professor Dr. Tolga Erdoğan and Associate Professor Dr. Münevver İlgin Dibek descended into the well I had fallen into, illuminated me with their lanterns, and together we climbed out of that well. Or let me put it this way: I threw a stone into the well, and then they searched for it, found it, and gifted it back to me. And finally, my dear friend Hilal Altunay-Yılmaz, as in all matters, accompanied me during my thesis process, made my life much easier, and was one of my primary social resources for my emotional regulation. I wish I could be as intelligent and practical as she is.

I feel very fortunate to be surrounded by you all. Thank you all for everything.

TABLE OF CONTENTS

PLAGIARISM	iii
ABSTRACT.....	iv
ÖZ.....	vi
DEDICATION	viii
ACKNOWLEDGMENTS	ix
TABLE OF CONTENTS.....	x
LIST OF TABLES	xv
LIST OF FIGURES.....	xviii
LIST OF ABBREVIATIONS	xix
CHAPTERS	
1. INTRODUCTION	1
1.1. Background to the Study.....	1
1.2. Purpose of the Study.....	9
1.3. Research Questions	9
1.4. Significance of the Study	11
1.5. Definitions of Terms.....	13
2. LITERATURE REVIEW	15
2.1. Eudaimonic Psychological Well-Being	15
2.2. Key Individual Psychological Resources	21
2.2.1. Resilience or Personality Hardiness	23
2.2.2. Hope.....	24
2.2.3. Optimism.....	26
2.2.4. Self-Esteem	27

2.2.5.	Self-Efficacy	28
2.2.6.	Self-Control	29
2.2.7.	Sense of Coherence	30
2.2.8.	The Interrelations between Key Individual Psychological Resources.....	32
2.3.	Psychological Resources and Psychological Well-Being	33
2.4.	Moderator Variables	34
2.5.	Summary of the Literature Review	36
3.	METHOD	38
3.1.	Research Design	38
3.2.	Study Variables.....	38
3.3.	Inclusion Criteria	39
3.4.	Exclusion Criteria	40
3.5.	Main Steps of the Literature Search.....	40
3.6.	Results of the Literature Search.....	41
3.7.	Coding Process	44
3.8.	Analytic Procedures and Effect Size Calculations	46
3.9.	Statistical Analyses	46
3.10.	Missing Data and Approaches to Deal with the Missingness	48
3.11.	Limitations of the Study.....	52
4.	RESULTS.....	54
4.1.	Descriptive Summary of the Primary Studies	54
4.2.	Main and Moderator Analyses for Key Individual Psychological Resources and Psychological Well-Being.....	57
4.2.1.	Overall Effect Size between Key Individual Psychological Resources and Psychological Well-Being.....	57
4.2.2.	Analyses of Publication Bias.....	58

4.2.3.	Moderator Analyses.....	62
4.2.3.1.	Publication Year.....	62
4.2.3.2.	Sample Size.....	63
4.2.3.3.	Age Group	63
4.2.3.4.	Country of Origin of the Participants	63
4.2.3.5.	Adapted or Original Version of the PWB Scales Used.....	63
4.2.3.6.	Frequency of the Usage of the Scales	63
4.2.3.7.	Cultural Dimensions.....	63
4.3.	Main and Moderator Analyses for Resilience and Psychological Well-Being.....	64
4.3.1.	Overall Effect Size between Resilience and Psychological Well-Being.....	64
4.3.2.	Analyses of Publication Bias	65
4.3.3.	Heterogeneity Analysis.....	68
4.3.4.	Moderator Analyses.....	69
4.4.	Main and Moderator Analyses for Hope and Psychological Well-Being ..	71
4.4.1.	Overall Effect Size between Hope and Psychological Well-Being.....	71
4.4.2.	Analyses of Publication Bias	71
4.4.3.	Heterogeneity Analysis.....	74
4.4.4.	Moderator Analyses.....	75
4.5.	Main and Moderator Analyses for Optimism and Psychological Well-Being.....	76
4.5.1.	Overall Effect Size between Optimism and Psychological Well-Being.....	76
4.5.2.	Analyses of Publication Bias	76
4.5.3.	Heterogeneity Analysis.....	80
4.5.4.	Moderator Analyses.....	80

4.6.	Main and Moderator Analyses for Self-Esteem and Psychological Well-Being	82
4.6.1.	Overall Effect Size between Self-Esteem and Psychological Well-Being	82
4.6.2.	Analyses of Publication Bias	82
4.6.3.	Heterogeneity Analysis	85
4.6.4.	Moderator Analyses	86
4.7.	Main and Moderator Analyses for Self-Efficacy and Psychological Well-Being	87
4.7.1.	Overall Effect Size between Self-Efficacy and Psychological Well-Being	87
4.7.2.	Analyses of Publication Bias	88
4.7.3.	Heterogeneity Analysis	91
4.7.4.	Moderator Analyses	91
4.8.	Main Effect Analysis for Self-Control and Psychological Well-Being....	92
4.8.1.	Overall Effect Size between Self-Control and Psychological Well-Being	92
4.8.2.	Analyses of Publication Bias	93
4.8.3.	Heterogeneity Analysis	96
4.8.4.	Moderator Analyses	97
4.9.	Main Effect Analysis for Sense of Coherence and Psychological Well-Being	98
4.9.1.	Overall Effect Size between Sense of Coherence and Psychological Well-Being	98
4.9.2.	Publication Bias	99
4.9.3.	Heterogeneity Analysis	102
4.9.4.	Moderator Analyses	103
4.10.	Summary of the Results	104

5. DISCUSSION	107
5.1. Discussion of the Descriptive Results	107
5.2. Discussion of the Main Analysis.....	111
5.3. Discussion of the Key Individual Psychological Resources.....	116
5.4. Implications for Practice	121
5.5. Recommendations for Further Research.....	122
REFERENCES.....	124
APPENDICES.....	181
A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE.	181
B. CURRICULUM VITAE	182
C. HOFSTEDE’S SIX CULTURAL DIMENSIONS	190
D. DESCRIPTIVE INFORMATION OF THE MAIN STUDIES	191
E. FOREST PLOT.....	206
F. SCALES OF PSYCHOLOGICAL WELL-BEING.....	207
G. EXAMPLES OF STRATEGIES FOR INCREASING PSYCHOLOGICAL WELL-BEING THROUGH KEY INDIVIDUAL PSYCHOLOGICAL RESOURCES	212
H. TURKISH SUMMARY / TÜRKÇE ÖZET	215
I. THESIS PERMISSION FORM / TEZ İZİN FORMU.....	227

LIST OF TABLES

Table 2.1. Dimensions and Definitions of PWB	18
Table 2.2. Cultural Dimensions and Their Descriptions	35
Table 4.1. Results of the Random Effect Three-Level Meta-Analysis.....	57
Table 4.2. Egger's Regression Test Results for All Studies	60
Table 4.3. Rosenthal's FSN of All Studies	61
Table 4.4. Orwin's FSN of All Studies	61
Table 4.5. Begg's and Mazumdar's Rank Correlation for All Studies	62
Table 4.6. Moderator Analyses for All Studies	64
Table 4.7. Effect Size and Statistical Test for Resilience	65
Table 4.8. Egger's Regression Test Results for Resilience.....	67
Table 4.9. Rosenthal's FSN of All Studies for Resilience	67
Table 4.10. Orwin's FSN of All Studies for Resilience.....	68
Table 4.11. Begg's and Mazumdar's Rank Correlation for Resilience	68
Table 4.12. Heterogeneity Tests for Resilience.....	69
Table 4.13. Categorical Moderator Analyses for Resilience	69
Table 4.14. Continuous Moderator Analyses for Resilience	70
Table 4.15. Effect Size and Statistical Test for Hope	71
Table 4.16. Egger's Regression Test Results for Hope	73
Table 4.17. Rosenthal's FSN of All Studies for Hope.....	73
Table 4.18. Orwin's FSN of All Studies for Hope	74
Table 4.19. Begg's and Mazumdar's Rank Correlation for Hope.....	74
Table 4.20. Heterogeneity Tests for Hope	74
Table 4.21. Categorical Moderator Analyses for Hope	75
Table 4.22. Continuous Moderator Analyses for Hope	76
Table 4.23. Effect Size and Statistical Test for Optimism	76
Table 4.24. Egger's Regression Test Results for Optimism	78
Table 4.25. Rosenthal's FSN of All Studies for Optimism.....	79
Table 4.26. Orwin's FSN of All Studies for Optimism	79

Table 4.27. Begg's and Mazumdar's Rank Correlation for Optimism	79
Table 4.28. Heterogeneity Tests for Optimism.....	80
Table 4.29. Categorical Moderator Analyses for Optimism.....	80
Table 4.30. Continuous Moderator Analyses for Optimism.....	81
Table 4.31. Effect Size and Statistical Test for Self-Esteem	82
Table 4.32. Egger's Regression Test Results for Self-Esteem	84
Table 4.33. Rosenthal's FSN for All Studies for Self-Esteem.....	85
Table 4.34. Orwin's FSN of All Studies for Self-Esteem	85
Table 4.35. Begg's and Mazumdar's Rank Correlation for Self-Esteem.....	85
Table 4.36. Heterogeneity Tests for Self-Esteem	86
Table 4.37. Categorical Moderator Analyses for Self-Esteem	86
Table 4.38. Continuous Moderator Analyses for Self-Esteem	87
Table 4.39. Effect Size and Statistical Test for Self-Efficacy	87
Table 4.40. Egger's Regression Test Results for Self-Efficacy	90
Table 4.41. Rosenthal's FSN of All Studies for Self-Efficacy	90
Table 4.42. Orwin's FSN of All Studies for Self-Efficacy.....	90
Table 4.43. Begg's and Mazumdar's Rank Correlation for Self-Efficacy	91
Table 4.44. Heterogeneity Tests for Self-Efficacy.....	91
Table 4.45. Categorical Moderator Analyses for Self-Efficacy.....	91
Table 4.46. Continuous Moderator Analyses for Self-Efficacy.....	92
Table 4.47. Effect Size and Statistical Test for Self-Control.....	93
Table 4.48. Egger's Regression Test Results for Self-Control.....	95
Table 4.49. Rosenthal's FSN of All Studies for Self-Control	95
Table 4.50. Orwin's FSN of All Studies for Self-Control.....	96
Table 4.51. Begg's and Mazumdar's Rank Correlation for Self-Control	96
Table 4.52. Heterogeneity Tests for Self-Control.....	97
Table 4.53. Categorical Moderator Analyses for Self-Control.....	97
Table 4.54. Continuous Moderator Analyses for Self-Control.....	98
Table 4.55. Effect Size and Statistical Test for Sense of Coherence	99
Table 4.56. Egger's Regression Test Results for Sense of Coherence.....	101
Table 4.57. Rosenthal's FSN of All Studies for Sense of Coherence	101
Table 4.58. Orwin's FSN of All Studies for Sense of Coherence.....	101
Table 4.59. Begg's and Mazumdar's Rank Correlation for Sense of Coherence ..	102

Table 4.60. Heterogeneity Tests for Sense of Coherence	102
Table 4.61. Categorical Moderator Analyses for Sense of Coherence	103
Table 4.62. Continuous Moderator Analyses for Sense of Coherence	104



LIST OF FIGURES

Figure 2.1. Core Dimensions of PWB and Their Theoretical Foundations.....	16
Figure 3.1. Study Acquisition Process.....	44
Figure 3.2. Hypothetical Funnel Plots	50
Figure 4.1. Heterogeneity Plot Produced with R Program	58
Figure 4.2. Funnel Plot of All Studies Included in the Main Meta-Analysis	60
Figure 4.3. Forest Plot for Studies on Resilience and PWB	65
Figure 4.4. Funnel Plot of Studies on Resilience and PWB	66
Figure 4.5. Forest Plot for Studies on Hope and PWB.....	72
Figure 4.6. Funnel Plot of the Studies on Hope and PWB	72
Figure 4.7. Forest Plot for Studies on Optimism and PWB.....	77
Figure 4.8. Funnel Plot of Studies on Optimism and PWB.....	78
Figure 4.9. Forest Plot for Studies on Self-Esteem and PWB	83
Figure 4.10. Funnel Plot for Studies on Self-Esteem and PWB	84
Figure 4.11. Forest Plot for Studies on Self-Efficacy and PWB.....	88
Figure 4.12. Funnel Plot for Studies on Self-Efficacy and PWB.....	89
Figure 4.13. Forest Plot for Studies on Self-Control and PWB	94
Figure 4.14. Funnel Plot for Studies on Self-Control and PWB.....	94
Figure 4.15. Forest Plot for Studies on Sense of Coherence and PWB.....	99
Figure 4.16. Funnel Plot for Studies on Sense of Coherence and PWB	100

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
APA	American Psychological Association
CMA	Comprehensive Meta Analysis
FDA	Food and Drug Administration
FSN	Fail-Safe N
HERO	Hope, Efficacy, Resilience, Optimism
ILO	International Labour Organization
NEET	Not in Education, Employment, or Training
NTC	National Thesis Center
PsyCap	Psychological Capital
PTSD	Post Traumatic Stress Disorder
PWB	Psychological Well-Being
PWBScales	Psychological Well-Being Scales
SDGs	Sustainable Development Goals
SOC	Sense of Coherence
SWB	Subjective Well-Being
TMF	Trim and Fill
WEIRD	Western, Educated, Industrialized, Rich, and Democratic
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1. Background to the Study

What is a good life or a life well lived? Sonja Lyubomirsky (2001), in her well-known article, addressed the central importance of the question of why some people are happier than others for both theoretical and practical reasons are. She argued that positive psychology's main goal is to find the answers to this question. Throughout the history of philosophy, happiness has been considered the ultimate goal behind the motivation for human action. Various standards have been suggested to determine what constitutes a good life or to define what an optimal life experience entail. Obviously, this debate has generated various theoretical and practical implications for people and institutions who are constantly in search of "the better" in life (Ryan & Deci, 2001). The seminal work of Seligman and Csikszentmihalyi (2000) accelerated the positive psychology movement, positing the possibility and necessity of a vision of a good life that is empirically sound, understandable, and leads to positive, fulfilled individuals and thriving communities.

For decades, scientific efforts on indicators of psychological health have largely and traditionally focused on the absence or presence of negative emotions, thoughts, and behaviors such as depression, anxiety, addiction, and violence. In other words, much more attention has been devoted to human suffering and unhappiness than to positive psychological functioning (Diener, 1984; Ryan & Deci, 2001; Ryff, 1995; Zhang & Chen, 2019). Consequently, human capacities, flourishing needs, and protective factors regarding well-being have long been ignored (Ryff & Singer, 1996). The emergence of a positive psychology school, drawing on a generous humanistic approach, challenged this paradigm and initiated a new perspective and research focus with positive psychological constructs like happiness, satisfaction, optimism, and

well-being (Seligman & Csikszentmihalyi, 2000). Positive psychology offers a more appreciative point of view regarding human potential, motives, and capacities (Sheldon & King, 2001).

In recent years, research on well-being has flourished both within psychology and beyond, exploring well-being outcomes and predictors in response to various life challenges and experiences. Such that, the World Health Organization (WHO) has shifted the definition of health from “the absence of disease” to “a state of complete physical, mental, and social well-being”. The WHO (2001) re-defined mental health as “...a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her own community” (p.1). The definition itself clearly states that well-being and positive human functioning are indicators of mental health. Before the declaration of the WHO, Seligman and Csikszentmihalyi (2000, p.10) had already claimed, “If psychologists wish to improve the human condition, it is not enough to help those who suffer. The majority of “normal” people also need examples and advice to reach a richer and more fulfilling existence”.

Researchers have studied the concept of well-being through two traditions: subjective well-being (SWB) and psychological well-being (PWB) (Keyes et al. 2002). Ryan and Deci’s (2001) review organized the two streams as such: SWB deals with happiness (hedonic well-being), whereas PWB deals with human potential (eudaimonic well-being). Eudaimonia deals with living in a way that inspires expression or fulfillment of one’s full potential (Deci & Ryan, 2008). Aristotle first used the term “eudaimonia” and emphasized that each person comes to the world with unique capacities, known as “daimons”, and suggested that recognizing and realizing them should be the central task of life (Ryff, 1989b). Hedonism is concerned with the perception of pleasure, displeasure, satisfaction, dissatisfaction, happiness, and unhappiness (Burns & Machin, 2009). Both approaches have different taxonomies although they assess well-being. SWB addresses the dominance of positive affect over negative affect and cognitive evaluation of quality of life, but PWB focuses on perceived thriving vis-à-vis the existential challenges of life. Scholars have found consistent empirical evidence that a happy and a meaningful life are somewhat related but disparate, yet may complement each other, not compensate for (e.g., Keyes et al.,

2002; McMahan & Estes, 2011). The findings of the two traditions diverge more than intersect at critical points, and both ask different questions as to what human nature is and what constitutes a good life and a society (Ryan & Deci, 2001).

Scientific attempts to define and measure well-being do not date back to old times. As an indicator of well-being, Neugarten et al. (1961) suggested and tested the construct of life satisfaction, including five components: zest, resolution, and fortitude; congruence between desired and achieved goals; positive self-concept; and mood tone. Later on, the famous SWB review by Warner Wilson (1967) concluded that a happy person is a “young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, job morale, modest aspirations, of either sex and of a wide range of intelligence” (p.294). Then, Bradburn (1969) first introduced the concept of PWB, operationalizing it with the happiness index as a function of the balance between positive and negative affect. Diener (1984) introduced a more comprehensive tripartite model of SWB including distinct but related components: frequent positive affect, infrequent negative affect, and cognitive evaluations (e.g., life satisfaction), together often summarized as happiness. After a while, Ryff (1989a) addressed the loose theoretical grounding of currently available SWB empirical literature. She further claimed that prior formulations of SWB disregard significant facets of positive functioning and offered an empirically validated alternative formulation encompassing six theory-guided dimensions of PWB as (1) sense of self-acceptance, (2) positive relations with others, (3) autonomy, (4) environmental mastery, (5) purpose in life, (6) and personal growth. According to Ryff (1989a), people seek to feel good about themselves, form and maintain interpersonal relationships based on mutual warmth and trust, shape their environment to meet their needs and desires, exert agency over their lives, find meaning in their efforts and challenges, and make the most of their capacities and talents. Addressing all six of these areas is crucial for having a good and meaningful life.

More than two decades ago, Diener et al. (1999) stated that the scientific community should understand the “causal pathways leading to happiness” (p. 276). To date, researchers have reported numerous individual, interpersonal, and contextual factors as significant predictors of well-being among people from diverse age groups. Ryan and Deci's comprehensive review (2001) summarizes personality and individual

differences among people who are likely to be well or happy and those who are not. They emphasized that scientific answers to this question mainly focused on SWB. Of the famous “Big Five” personality traits, extraversion and agreeableness were consistently associated with high SWB, whereas neuroticism was exactly the opposite. The relation of the big five traits to PWB produced different results on a component basis as such: extraversion, conscientiousness, and low neuroticism were linked with a higher sense of self-acceptance, environmental mastery, and purpose in life; openness to experience with higher personal growth; agreeableness and extraversion with more positive relations with others; and low neuroticism with higher autonomy.

The interplay between emotions and well-being is much more complicated. SWB refers to the frequency and intensity of experiencing positive emotions whereas PWB research showed that people repressing and avoiding negative feelings tend to report lower SWB and PWB. This line of research emphasizes the dual functions of feelings—both negative and positive—rather than the dominance of one type over the other across different times and events. PWB approach values emotional positivity but does not formulate it as the sole well-being indicator, rather treats it as a byproduct of eudaimonic living. Moreover, negative emotions are also valuable in themselves, and they are an inevitable part of human life, and transient as positive emotions.

Moreover, Ryan and Deci's (2001) review shows that material wealth adds no additional well-being to individuals and nations, except in cases of poverty. In poorer nations, financial status correlated more strongly with life satisfaction than in wealthier nations. On the contrary, people who overvalued money were at risk for low well-being. Of all the factors influencing well-being, warm, trusting, and supportive interpersonal relationships have taken the lead. Not quantity of interpersonal interactions, but quality of relatedness has engendered well-being among people. In the same review, another active area of research made a strong reference to the positive relationship between self-efficacy and well-being. Feelings of competence about life goals have predicted enhanced well-being, but only at the threshold of optimal level of challenge –neither too easy nor too hard.

The two traditions of conceptualizing well-being as SWB and PWB, one dealing with happiness, and the latter with human potential (Ryan & Deci, 2001), are

key constructs of positive psychology, but they address different features of what it means to be well. The current study focused on Psychological Well-Being (PWB) as conceptualized by Ryff (1989a). This model incorporates several components from many mainstream theories that depict how to live a fulfilling life or the characteristics of a healthy personality (e.g., Carl Rogers, fully functioning person; Abraham Maslow, self-actualization; Victor Frankl, will to meaning; Erik Erikson, personal development; Alfred Jung, individuation). Compared to SWB, PWB is more like a holistic model tapping into several areas of a human's life.

Looking at current studies on PWB, a detailed examination of Google Academic (on August 22, 2023) yielded 21.300 studies between the years 2000-2023 with titles including the keyword of “psychological well-being”. A quick examination of 1132 pages indicated that personal/intra-individual factors have been the most studied ones with psychological well-being (e.g., resilience, self-compassion, self-esteem, emotion regulation, personality, sense of humor, hope, stress management, gratitude, basic psychological needs, psychological flexibility, self-efficacy, coping strategies, etc.). Following this, researchers have frequently examined spiritual practices (meditation, yoga), religiosity, mindfulness, physical activity, and sleep quality. Regarding interpersonal factors, social support is at the front, and family support, intimacy, social connectedness, social capital, and parental acceptance followed. Contextual factors such as work-life balance, work-family conflict, social media, job stress, and job satisfaction have also been studied but less frequently. It can be deduced that research on psychological well-being focused on more positive constructs than negative ones and mostly on individual factors. Hence, the literature is quite rich in terms of quantity, and significant associations between positive individual psychological factors and psychological well-being.

Resources of each kind (psychological, social, etc.), falling under protective factors and being positive psychological constructs, saw their sprouting in the outgrowth of World War II, whereby researchers identified that some men developed combat-related psychopathology, but some of them continued their lives with no psychological adversity (Grinker & Spiegel, 1945; as cited in Hobfoll, 2002). Thereafter, Caplan (1964, 1974), after working in Israel both during and aftermath of the war, was astonished by the ability of some individuals who sustain their mental

health regardless. He explained their conditions with two resources: a sense of mastery and social support. Hobfoll (2002) stated that these instances paved the way for resource-based views of human adaptation, coping, and well-being. These and many other (e.g., Berkman & Syme, 1979; Dohrenwend, 1978; Nuckolls et al., 1972) early roots of links between resources and well-being launched the plethora of such studies as well as many attempts to develop various resource models and theories.

Hobfoll (2002) pointed out that the paradigm shift in psychology manifested itself in the increase of the study of psychological resources in the examination of well-being. The author attempted to examine the common elements of existing key resource models (e.g., Bandura, 1982, 1997; Rosenbaum & Palmon, 1984; Scheier & Carver, 1985, 1992; Thoits, 1994), resource theories, and potential psychological and social resources in his article. He defined resources as “*entities that either are centrally valued in their own right (e.g., self-esteem, close attachments, health, and inner peace) or act as a means to obtain centrally valued ends (e.g., money, social support, and credit)*” (p. 307). Regarding individual psychological resources, the most widely studied key resources were stated as resilience, self-esteem, self-efficacy, self-control, hope, optimism, and a sense of coherence. A quick look on Google Academic containing “psychological resources” in somewhere of the studies published between 1990 and 2023 generated 4.030 results (checked on June 26, 2024). Looking at most of these studies, self-esteem, self-efficacy, hardiness, optimism, sense of coherence, resilience, sense of control, hope, and psychological capital (including self-efficacy, hope, optimism, and resiliency) were frequently used. Moreover, Youssef-Morgan and Luthans (2015), within several psychological resources, empirically supported HERO (hope, efficacy, resilience, optimism) as the higher order construct cluster over others. Perceived social support was another psychological resource that has been widely studied but it was not included in the current study because it is not an individual resource. Although there are hundreds of individual studies linking one or more of these key individual psychological resources with psychological well-being, there is no meta-analysis organizing existing results on one or more of these resources and psychological well-being.

When we look at the present, between 1990 and 2023, a comprehensive database search (EBSCOHost, Web of Science, Proquest Theses and Dissertations,

Google Academic, etc.) in psychology discipline with the subject term “psychological well-being” yielded over 80.000 published studies and unpublished theses and dissertations with duplicates. This huge number by itself demonstrates the ongoing and burgeoning scientific effort toward studying the two traditions of psychological well-being (eudaimonic and hedonic well-being). However, despite the plethora of such studies, the question arises as to why researchers have published very few meta-analyses on psychological well-being. Another salient point is that these studies operationally defined PWB by using different approaches. Studies with depression and anxiety-based mental-ill being approaches or indicators of psychopathology were blended with hedonic and eudaimonic perspectives. On the other hand, empirical knowledge has shown that positive affect is not the opposite of negative affect (Cacioppo & Bernston, 1999), well-being does not refer to the absence of mental illness (Ryan & Deci, 2001), and hedonic and eudaimonic approaches of well-being are conceptually mutually exclusive (Keyes et al., 2002; McMahan & Estes, 2011). Therefore, gathering those three approaches under a single roof of psychological well-being seems to muddy the waters and more refined meta-analyses on psychological well-being are needed to ensure the integrity of the concept. Considerable variety in both measures and terminology within the literature seems to make precise comparisons among studies difficult.

Besides, counseling psychology, over the history of its development as a specialty, has maintained a philosophical focus and a professional emphasis on finding and developing personal and social resources as well as on helping people use these resources more effectively (Lopez et al., 2006). *“This emphasis, in contrast to a focus on weakness and pathology, has remained constant in the profession over the years and still underlies the work of counseling psychologists”* (Fretz, 1985, p. 48). Counseling psychology in the 1960s also highlighted valuing and using personal and social resources to foster development and *“to help individuals to plan, obtain, and derive maximum benefits from the kinds of experiences which will enable them to discover and develop their potentialities”* (Jordaan et al., 1968, p. 1). Today, the *“focus on people’s assets and strengths, and positive mental health, regardless of the degree of disturbance”* remains one of counseling psychology’s major unifying themes (Gelso & Fretz, 2001, p. 6) and one of the profession’s distinctive, defining characteristics

(APA, 1999; Savickas, 2003). Starting from the historical roots of the profession, it can be deduced that exploring the impact of resources on psychological well-being fits the purpose of counseling.

Furthermore, exploring the determinants of the psychological well-being of people from various age groups is also critical for developing more effective prevention and intervention strategies. Over hundreds of studies examined potential protective factors for psychological well-being, but there have been scarce quantitative reviews (both systematic review and meta-analysis) of this well-established literature except a few meta-analysis studies like physical activity in advanced age (Netz et al., 2005), religiosity among older adults (Harris, 2001), nature connectedness (Pritchard et al., 2020), nature activities in children and young people (Roberts et al., 2020), mindfulness and yoga (Auty et al., 2017), and basic psychological need satisfaction and motivation in later life (Tang et al., 2020). Over and above, all these meta-analyses focused on a specific age group, and they used different concepts under the umbrella of psychological well-being like depression, anxiety, absence of symptoms, subjective well-being, etc. Identifying the extent of the relationship between protective factors and psychological well-being (based on a consistent conceptualization) of people would be valuable for informing mental health workers and policymakers and for guiding the next generation of research on psychological well-being.

Longitudinal data showed that cross-time gains in psychological well-being predicted a cross-time decline in mental health problems, thus emphasizing the need for great attention to the promotion of psychological well-being on a public basis (Keyes et al., 2010). Therefore, the aim of the present study is to apply meta-analytic techniques to assess the empirical evidence on key individual psychological resources and eudaimonic psychological well-being as defined and measured by Ryff (1989a), and across various age groups, except for children and adolescents.

Joshanloo (2014) identified six fundamental differences between Western and Eastern approaches to the good life and optimal functioning. These six differences are dichotomized as self-transcendence/self-enhancement, eudaimonism/hedonism, harmony/mastery, contentment/satisfaction, valuing/avoiding suffering, and relevance/relative irrelevance of spirituality and religion. The left-hand side of the

slashes identifies the Eastern paradigm for a good life. However, he added that both poles of the six domains could be observed in any culture, these poles are merely two general approaches describing cultural dynamics in the world. Based on these differences between Western and Eastern cultures, the current study aimed to explore the potential moderator effect of the country of origin of the participants as to the main and subgroup analyses, categorized as “Western” and “Eastern” according to the geographical region of the country. In addition to this categorization, Hofstede’s six cultural dimensions (power distance, individualism, motivation towards achievement and success, uncertainty tolerance, long-term orientation, and indulgence) were used as well.

1.2. Purpose of the Study

The main purpose of this meta-analysis study was to investigate the extent of the relationship between the key individual psychological resources (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence) and psychological well-being. In addition, the relationship of each of the key individual psychological resources with psychological well-being was also examined. Lastly, those relationships were aimed to further be explored one by one according to several moderators like publication year of the study, sample size, age group, country of origin of the participants, the PWB Scales adaptation or original version used, frequency of the usage of measurement tools to assess key individual psychological variables, and Hofstede’s six cultural dimensions.

1.3. Research Questions

The variable of psychological well-being was operationalized and included as developed and measured by Ryff’s theory (1989a). Although the construct has six dimensions, only studies that reported total scores of the Psychological Well-Being Scales (PWBS) were included in the meta-analysis. The current meta-analysis study examined the following main and sub-research questions.

1. How strong is the relationship between all and each key individual psychological resources (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence) and psychological well-being?

- a. How strong is the relationship between all key individual psychological resources and psychological well-being?
 - b. How strong is the relationship between resilience and psychological well-being?
 - c. How strong is the relationship between hope and psychological well-being?
 - d. How strong is the relationship between optimism and psychological well-being?
 - e. How strong is the relationship between self-esteem and psychological well-being?
 - f. How strong is the relationship between self-efficacy and psychological well-being?
 - g. How strong is the relationship between self-control and psychological well-being?
 - h. How strong is the relationship between a sense of coherence and psychological well-being?
2. Do the following variables (publication year of the study, sample size, age group, country of origin of the participants, version of the PWB scales used (original or adapted), frequency of the usage of the measurement tools to assess key individual psychological resources, Hofstede's cultural dimensions) moderate the relationship between all and each key individual psychological resources and psychological well-being?
 - a. Do the aforementioned variables moderate the relationship between all key individual psychological resources and psychological well-being?
 - b. Do the aforementioned variables moderate the relationship between resilience and psychological well-being?
 - c. Do the aforementioned variables moderate the relationship between hope and psychological well-being?
 - d. Do the aforementioned variables moderate the relationship between optimism and psychological well-being?
 - e. Do the aforementioned variables moderate the relationship between self-esteem and psychological well-being?

- f. Do the aforementioned variables moderate the relationship between self-efficacy and psychological well-being?
- g. Do the aforementioned variables moderate the relationship between self-control and psychological well-being?
- h. Do the aforementioned variables moderate the relationship between a sense of coherence and psychological well-being?

1.4. Significance of the Study

The literature places a lot of emphasis on the need for valid and reliable research syntheses of individual studies looking into related research problems across all scientific fields (Torgerson, 2003). Torgerson (2003) also added that there are hundreds of single research studies but rarely does a single study yield sufficiently conclusive findings on which to base prevention, intervention, and policy. Moreover, organizing existing research informs and encourages further research by providing what is missing, what is needed, what is outdated, etc., which, in turn, will contribute to the advancement of the scientific enterprise. Meta-analysis has the advantage of integrating results from a number of individual studies, thereby yielding more solid conclusions.

Furthermore, meta-analysis is a valuable tool to see the big picture of the results (both contradictory and similar) regarding a specific topic. Theoretically and empirically, the link between key individual psychological resources and psychological well-being has been postulated and shown; however, the power or robustness of this link remains unanswered. Meanwhile, from a positive psychology perspective, positive psychological constructs like key individual psychological resources are the backbone for the study of psychological well-being. Thus, it can be deduced that a meta-analysis investigating the overall association between key personal individual resources and psychological well-being is a need in the literature. Moreover, this study also examined the relationship between each key individual psychological resource and psychological well-being. Hence, eight meta-analyses were conducted. Therefore, by doing so, more refined conclusions can be drawn. Besides, by means of moderator analyses, the associations were scrutinized, allowing reaching deeper understanding of differences between the effect sizes.

The paradigm changes in the definition of health and the focus of psychology from illness-based to complete physical, social, and psychological well-being have inspired many scholars and practitioners to draw attention to the importance of one's resources and how they can mobilize their resources to boost their well-being. Rusk and Waters (2013) pointed out that this was an important redirection of inquiry towards human flourishing. In a way, psychology has evolved from being a science solely for individuals with mental health issues to becoming a field of study for everyone. Theoretical and empirical efforts exploring not only the causes of psychological problems but also the factors that may contribute to and maintain one's overall well-being have brought forward preventive and promotive approaches. Empowering individuals and societies' well-being has become a public health concern. For example, in 2015, the United Nations (see more at <https://sdgs.un.org/goals>) declared 17 sustainable development goals (SDGs) with an aim to build resilience and foster equality and inclusion for better communities. The title of the third goal is "ensure healthy lives and promote well-being for all at all ages". Governments, institutions, and academia have started to review their policies, practices, and research outputs in the light of those SDGs and they have initiated to integrate these SDGs into their short and long-term actions and plans. The inclusion of well-being in this global development project confirms and supports the necessity for approaches that promote the well-being of individuals.

Furthermore, Oades and Johnston (2017a) introduced the concept of "well-being literacy" and offered "positive education". They defined well-being literacy as "the vocabulary, knowledge, and skills that may be intentionally used to improve the well-being of oneself and others" (Oades et al., 2017b). Through the lens of well-being literacy, Oades et al (2017a) defined positive education as "education for both traditional skills and happiness", emphasizing the importance of learning environments to enable learners to acquire the necessary knowledge and skills to develop their own and others' well-being. Well-being language that is established in the learning environments may influence thought and action, which in turn may affect important life outcomes (Oades et al., 2017a). This exciting opinion paper (Oades et al., 2017a) implies the future well-being trajectory, not only on an individual basis but

also on a community. Hence, well-being is hopefully not far away from becoming a human right that should be included in the Universal Declaration of Human Rights.

The aforementioned attempts support the ever-increasing penetration of the well-being concept into different contexts. However, the dissemination of the concept of well-being does not seem to progress at the same pace as the synthesis of empirical studies on well-being. Taking a bird's eye view of existing empirical findings can enable us to gain broader knowledge. The increasing importance of well-being also necessitates the exploration of the factors that are related to it. Among three pillars of well-being (physical, social, and psychological), this meta-analysis is expected to meet the need for comprehensive syntheses in the context of psychological well-being and investigate the potential link with key psychological resources.

Alongside the contribution to the psychological well-being literature, this evidence-based meta-analysis aims to be a guide for mental health professionals and policymakers in the prevention and intervention practices to support the psychological well-being of individuals within the context of key individual psychological resources. Key individual psychological resources are malleable and be strengthened by prevention and intervention studies (Antonovsky, 1993; Carver & Scheier, 2002; Steinhardt & Dolbier, 2008; Thompson et al., 2021).

1.5. Definitions of Terms

Meta-analysis is one of the ways of conducting research synthesis and is described as “*a research methodology that aims to quantitatively integrate the results of a set of primary studies about a given topic in order to determine the state of the art on that topic*” (Sánchez-Meca & Marín-Martínez, 2010, p. 274).

The effect size is described as “*a value which reflects the magnitude of the treatment effect or (more generally) the strength of a relationship between two variables is the unit of currency in a meta-analysis*” (Borenstein et al., 2009, p. 3).

Psychological well-being is conceptualized as a mental state harboring the dimensions of self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989a).

Key individual psychological resources are defined as “*personal characteristics that are valued by the individual or that serve as a means for the attainment of any kind of objects, personal characteristics, conditions, or energies*” (Hobfoll, 1989, p. 516). Among several key individual psychological resources, this meta-analysis focused on seven of them: resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence.

Cultural Values are defined as “*the stable elements in a given culture and broad tendencies to prefer certain traits of affairs over others that are acquired early in human life*” (Hofstede et al., 2010, p. 9).



CHAPTER 2

LITERATURE REVIEW

The main purpose of this chapter is to summarize related literature about eudaimonic psychological well-being and psychological resources, to mention the interrelations between key individual psychological resources, and to give theoretical and empirical connections between key individual psychological resources and psychological well-being.

2.1. Eudaimonic Psychological Well-Being

Aristotle's *Nicomachean Ethics* (1894) claimed "eudaimonia" as the highest of all goods achievable by human action. Later, Bradburn (1969) translated the term to signify "happiness". However, this translation evoked an equivalence between eudaimonia and hedonia, and this problematic formulation was contrary to Aristotle's essence of eudaimonia - the idea of striving toward excellence based on one's unique potential (Ryff & Singer, 2008). Hence, Ryff made an effort to reformulate and conceptualize "eudaimonia" and refined the core meaning of eudaimonia in a way that centers the development and self-realization of the individual (Ryff, 1989a).

The balance between positive and negative affect (Bradburn, 1969) and life satisfaction as the index of subjective well-being (Diener, 1984) were the two dimensions central to happiness or well-being literature. However, these two approaches could not go beyond learning how certain macro-level social changes affected the sense of psychological well-being and differentiated people who were aging successfully from those who were not, thus they did not aim to define the basic structure of psychological well-being. Until Ryff's (1989a) first attempt to operationalize psychological well-being with a theoretical rationale, psychological well-being was far from being a theory-guided conception. She argued that prior

formulations of psychological well-being have missed some essential features of positive psychological functioning. Starting from this, she proposed the first theory-guided and empirically tested model of psychological well-being.

Ryff (1989a) found various points of convergence in the previous formulations of positive psychological functioning like Maslow's (1968) self-actualization, Roger's (1961) fully functioning person, Jung's (1933) individuation, and Allport's (1961) maturity. In addition to clinical theories of personal growth, life-span developmental theories, such as Erikson's (1959) psychosocial stage model, also define psychological well-being. Moreover, from the mental health literature, Jahoda (1958) proposed unique criteria (positive self-attitudes, growth and self-actualization, integration of the personality, autonomy, reality perception, and environmental mastery) for positive mental health, and argued for the first time that defining mental health, as the absence of mental illness was unsuitable. Although they have a strong theoretical background, these three perspectives have not been accompanied by credible assessment procedures. All the other theoretical foundations of Ryff's psychological well-being model are shown in Figure 2.1. To fill this gap in the well-being literature, Ryff (1989a) integrated convergences in this literature into a more parsimonious summary falling under psychological well-being, consisting of six dimensions as self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. In other words, Ryff conceptualized psychological well-being as a state incorporating those central six components.

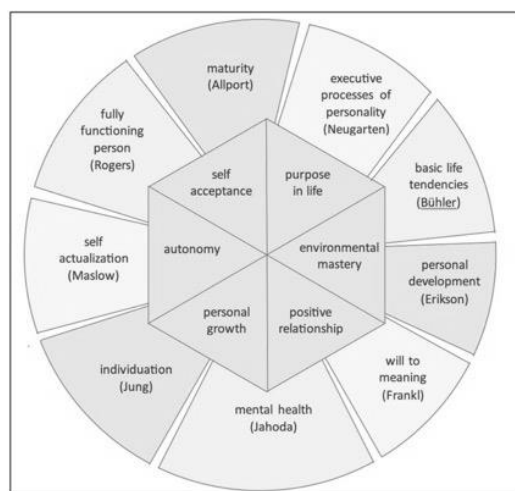


Figure 2.1. Core Dimensions of PWB and Their Theoretical Foundations (Ryff & Singer, 2008)

Self-acceptance is defined as the extent to which one holds positive attitudes toward oneself and one's life. *Positive relations* with others refer to the existence and maintenance of warm, trusting interpersonal relationships in one's life. *Autonomy* is related to self-determination, independence, and the regulation of one's behavior from within. *Environmental mastery* is one's ability to choose or create environments suitable to one's psychic conditions. *Purpose in life* describes a person having clear goals, intentions, sense of directedness, all of which provide meaning and integration in one's life. *Personal growth* is a quality of continuing to develop one's potential, and to grow and expand as a person. The original extended summary table of the six dimensions by Ryff (1989a, p. 45-46) is presented in Table 2.1.

Ryff (1989b) published a second article in the same year she developed the model of psychological well-being, and she attempted to operationalize the six dimensions of psychological well-being in a sample of 321 men and women from young, middle-aged, and older adults. In this study, she developed the Psychological Well-Being Scales (PWBS), and the results of scale construction produced acceptable preliminary psychometric properties. Since then, the PWBS has been adapted and validated to several languages (e.g., Díaz et al., 2006; Sasaki et al., 2020) and used as a benchmark scale in eudemonic psychological well-being literature. She argued the necessity of further studies that would assess the fit between the proposed model of psychological well-being and the values and ideals of those to whom they were applied, based on her observation that existing theories of well-being were mostly manifesting middle-class values (Ryff, 1985, cited in Ryff 1989b). To fill this necessity, Ryff (1989c) conducted interviews with 171 middle-aged and older women and men to explore their views of psychological well-being. The respondents, on purpose, did not include those who were suffering from severe economic, physical, and psychological hardship because the focus of the research was positive functioning. Results indicated that all age groups emphasized having good relationships with others, middle-aged respondents included self-confidence, self-acceptance, and self-knowledge, and older respondents claimed accepting change in defining well-being.

Furthermore, Ryff (1995) argued how culture bears on the six dimensions of psychological well-being on the axis of individualism-independence and collectivism-interdependence. She predicted more self-oriented components of well-being such as

self-acceptance and personal growth for the Western cultures, and more others-oriented aspects of well-being like positive relationships with others in Eastern cultures. With her colleagues, they examined these issues with U.S. adults and midlife

Table 2.1. *Dimensions and Definitions of PWB*

Dimension	Definition
Self-Acceptance	High scorer: Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self; including good and bad qualities; feels positive about past life. Low scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different from what one is.
Positive Relations with Others	High scorer: Has warm, satisfying, trusting relations with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships. Low scorer: Has few close, trusting relations with others; finds it difficult to be warm; open and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.
Autonomy	High scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards. Low scorer: Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.
Environmental Mastery	High scorer: Has a sense of mastery and competence in managing the environment; controls a complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values. Low scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding opportunities; lacks a sense of control over the external world.
Purpose in Life	High scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give purpose; has aims and objectives for living. Low scorer: Lacks a sense of meaning in life; has few goals or aims; lacks a sense of direction; does not see the purpose of past life; has no outlook or beliefs that give life meaning.
Personal Growth	High scorer: Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has a sense of realizing one's potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness. Low scorer: Has a sense of personal stagnation; lacks the sense of improvement or expansion over time; feels unable to develop new attitudes or behaviors; feels bored and uninterested in life.

Korean adults (Ryff et al., 1995; cited in Ryff, 1995), and confirmed the main effects of culture. Koreans showed the highest scores on positive relationships with others whereas Americans scored highest on the dimension of personal growth. Various determinants other than culture in the variation of well-being like educational level, marital status, parental status, physical health, and being the adult child of an alcoholic parent were examined in several cross-sectional and longitudinal studies, most of which explored life experiences and interpretations of the participants (summarized in Ryff, 1995).

Later, Ryff and Singer (1996) reviewed empirical research on positive psychological functioning published after the psychological well-being model had been introduced. To begin with, the sociodemographic characteristics part addressed whether psychological well-being profiles differ as a function of gender, life course, social class status, and culture. Cultural variations were given above, presenting differences in basic dimensions of well-being. Positive relations with others, autonomy, and self-acceptance did not change across age groups (young, middle, and old). Environmental mastery and autonomy showed a rising pattern from young adulthood to midlife, whereas personal growth and purpose in life aspects tended to decrease from middle age to old age. Across various datasets, women tended to report significantly higher scores on the measures of positive relations with others and personal growth than men. The remaining five domains did not show any difference based on the gender of the participants. In terms of socioeconomic status, education level remained strongly associated with all aspects of well-being even after controlling some confounding factors such as IQ, income, parental education, and occupational status. Higher well-being ranked second among the participants with higher occupational status. However, income level was not a distinctive factor for well-being.

Ryff and Singer (1996) elaborated on the implications of research on the psychological well-being model for non-clinical populations and the study and treatment of mental disorders in clinical populations. Four avenues were proposed as potential linkages among them: (1) in determining the effectiveness of an intervention or a treatment, be it psychological or pharmacological, psychological well-being components could be used as self-reported strengths or gains, in addition to evaluate the absence of negatives and problems, (2) knowledge in psychological well-being

gives an etiological route to understand the factors that influence the occurrence and maintenance of mental health disorders via identification of absence of goods in peoples' lives, in addition to the focus on presence of adversities, (3) engendering the aspects of psychological well-being in clients over and above alleviating the negatives may play critical roles of regaining mental health, and (4) investigating the positives in mentally healthy people and the factors that help them remain resilient despite of many adversities over the course of their lives may provide critical preventive knowledge for becoming physically and psychologically ill.

Ryff (2014) revisited the conceptual origins of the psychological well-being model and synthesized empirical studies emerging from six themes. At that time, over 350 publications from more than 150 journals had been published using the Psychological Well-Being Scales (PWBS). Because of the impossibility of covering all the studies in one article, Ryff (2014) categorized the findings according to (1) development and aging, (2) personality correlates, (3) family experiences, (4) work and other life engagements, (5) health and biological research, and (6) clinical and intervention studies. Studies in theme 1 concluded that psychological well-being gets higher through progressing the developmental tasks of adult life, but personal growth and purpose in life show a decline in old age; people reported higher well-being when they feel younger, but they do not wish to be younger; that well-being changes in line with how people negotiate challenges in adult life. Personality correlates with psychological well-being including significant positive links between openness to experience and personal growth; agreeableness with positive relations; extraversion, neuroticism, conscientiousness, and environmental mastery; optimism, self-esteem, emotion regulation, satisfaction of psychological needs, self-reported empathy, independence, interdependence with psychological well-being indicators.

Regarding family experiences, the psychological well-being trajectories of participants changed positively if they were consistently married, parenting healthy children, having greater role involvement, and helping others in the family. However, those who lost their child and/or their parent(s) in childhood, experienced physical and/or psychological violence from parents in childhood and cared for an aging parent reported impaired psychological well-being. Work and other life engagements like less family-work and/or work-family conflict, pursuing career goals, positive spillover

from work to family and/or family to work, engaging in volunteering and donating activities, and religious participation and experience predicted higher levels of multiple aspects of well-being. Research findings in theme five (health and biological research) addressed the predictive role of higher psychological well-being in better sleep quality, exercise, and control of weight; lower stress hormone levels (such as cortisol); less risk in inflammatory and cardiovascular problems; and less amygdala activation. Concerning the last theme, clinical and intervention studies validated that both psychological well-being and the absence of psychological distress are important indicators of overall mental health. Moreover, clinical interventions (such as well-being therapy) that were targeted to promote well-being have produced promising evidence for relapse prevention. Additionally, interventions were designed beyond the clinical settings, such as work and school environments to enhance well-being and prevent mental illness.

2.2. Key Individual Psychological Resources

Resources are described “*as those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for the attainment of these objects, personal characteristics, conditions, or energies*” (Hobfoll, 1989, p. 516). A more recent definition of resources by Hobfoll (2002, p. 307) is that “*resources are those entities that either are centrally valued in their own right (e.g., self-esteem, close attachments, health, and inner peace) or act as a means to obtain centrally valued ends (e.g., money, social support, and credit)*”.

Resources can be external possessions (e.g., financial capital), social roles (e.g., being a successful brain surgeon), interpersonal relationships (e.g., having a supportive family), and personal characteristics (e.g., self-esteem) (Diener & Fujita, 1995). The division of resources by Hobfoll (2002) is that they can be distal and proximal to the self, biological or cultural, and internal and external.

Among several resource theories, key resource and multiple-component resource theories aim to identify individual-level psychological resources that people utilize to achieve physical and/or mental well-being within a dynamic environment, and cope with various stresses faced during this achievement (Dorsch et al., 2016). These theories aim to establish the grounds for the resource-based view of well-being

(Hobfoll, 2002). Moreover, key resources and multiple-component resources are non-exchangeable psychological variables, and the value people attach to these resources depends on the degree of their beliefs that one or more of these resources will help them achieve their goals (Halbesleben & Wheeler, 2014).

Generally, resource theories focus on one single resource for dealing with stress and sustaining psychological well-being (Carver & Scheier, 1999). For example, Bandura's (1986; 1992; 1995) self-efficacy model is one of the prominent key-resource models, and Ozer and Bandura (1990) depicted self-efficacy as the main organizing resource that mobilizes or underlies people's ability to utilize other key resources. Scheier and Carver (1985; 1987; 1992; 1993) introduced another prominent resource theory and they suggested that optimism is the central and critical resource in the preservation of psychological well-being in times of stress. Hobfoll (2002) suggested subsuming all these resource approaches under the title of "*key resource theories*" (p. 308). Key resource theories hold the assumption that resources are vital for conditioning an individual's well-being (Carver & Scheier, 1999).

Multiple-component resource theories have been developed including resource constructs that include more than one component (e.g., Antonovsky, 1979; Kobasa, 1979). Among the well-known multiple-component resource theories, Antonovsky's (1979) and Kobasa's theories (1979) take the lead in the literature. Antonovsky (1979) developed the theory of sense of coherence, which is composed of three components: comprehensibility, manageability, and meaningfulness. Kobasa (1979) offered another multiple-component resource theory, which is personality hardiness, a combination of commitment, control, and challenge.

A review by Hobfoll (2002) identified that the most widely studied key individual psychological resources in psychology based on the two aforementioned theories are resilience or hardiness (Kobasa, 1979), hope (Hobfoll, 1989), optimism (Carver & Scheier, 1998), self-esteem (Rosenberg, 1965), self-efficacy (Bandura, 1997), self-control (Skinner, 1996; Seligman, 1975), and sense of coherence (Antonovsky, 1979). Psychological capital, a composite of optimism, hope, self-esteem, and self-efficacy (Luthans & Youssef, 2004); and core self-evaluations, a higher order dimension encompassing self-esteem, self-efficacy, locus of control, and

emotional stability are also well-known and widely used psychological resource models based on key resource theories (Judge et al., 2005).

Moreover, key resources refer to psychological characteristics that enable people to build lives that are more satisfying by cultivating effective management of stress (Thoits, 2006). Single or multiple resources are considered key to successful adaptation and meeting of several demands of life (Gorgievski et al., 2011). Resources have main, buffering, boosting effects on psychological well-being (Murrell & Norris, 1983). Resources of any kind aid people in fulfilling their physical and psychological needs and they facilitate people to be more able to make better progress toward their goals (Diener et al., 1995). Drawing on the Key Resources Theory and Multiple-Component Resource Theories, this study aimed to investigate self-efficacy, sense of coherence, resilience, self-esteem, optimism, hope, and self-control with psychological well-being.

2.2.1. Resilience or Personality Hardiness

Personality hardiness was identified by three components: “(a) the belief that people can control or influence the events of their experience, (b) an ability to feel deeply involved in or committed to the activities of their lives, and (c) the anticipation of change as an exciting challenge to further development (Kobasa, 1979, p. 3).” Hardiness and resilience are used interchangeably in the literature. Connor and Davidson (2003, p.77) defines resilience as “personal qualities that enable one to thrive in the face of adversity”. In other definitions, resilience is defined as maintaining one’s mental and physical equilibrium as stable in the face of stress and adversities (Bonanno, 2024), the ability to balance internal needs and desires in accordance with external demands (Block & Kremen, 1996), and mental health in relation to stressor load (Chmitorz et al., 2018). Having several overlapping and different definitions, the term “resilience” was argued to be an umbrella phenomenon encompassing several elements, and the utility of the construct would be best realized by doing so (Bonanno et al., 2015).

Resilience has been defined through the lenses of three orientations: trait, outcome, and process. Trait orientation (or trait resilience) adopts a stand towards resilience being a stable personality trait; outcome-oriented approach in which

resilience is regarded as maintaining or regaining mental health while and after facing stressors (Linnemann et al., 2022); and process-oriented orientation if outcome resilience is observed repeatedly (Kalisch et al., 2017). Over the previous two decades, resilience has started to be approached as a process or outcome-oriented concept rather than trait-oriented (Chmitorz et al., 2018). Smith et al. (2010) argued that resilience is an ability, rather than a personality characteristic (e.g., optimism), therefore it is malleable and easier to modify by implementing interventions. In the current meta-analyses, research studies from all three approaches were included.

Hu et al. (2015) conducted a meta-analysis on trait resilience and mental health from 60 studies with 111 effect sizes. The effect size was medium (0.503 in Fisher's z with Cohen's criteria). They also reported that adversity moderated the relationship between the two in such a way that greater adversity resulted in stronger mean effect sizes. In the meta-analysis, several mental health indicators were used like depression, life satisfaction, positive affect, negative affect, and anxiety. A more recent meta-analysis of longitudinal associations of psychological resilience and mental health among military personnel (van Der Meulen et al., 2020) included mental health indicators like alcohol use disorders identification, major depressive episodes, stress, generalized anxiety disorder, suicidal ideations, etc. All of their indicators were based on pathogenic variables. Based on 40 longitudinal independent studies, the effect size was reported small to medium. With participants aged 60 and older, a similar meta-analysis (Färber et al., 2020) of 27 studies generated a large effect size between trait resilience and mental health (depression, anxiety, PTSD symptoms, mental quality of life, and well-being). Of 27 studies, only two of them focused on well-being as an indicator of mental health. This may imply that resilience is mostly studied in the context of symptom-based mental health.

2.2.2. Hope

Hope is defined within the predominant perspective on hope in research as “a cognitive mindset that is based on a reciprocally derived sense of successful (a) agency (goal-directed determination) and (b) pathways (planning of ways to meet goals)” In other words, hope includes cognitive processes that facilitate the motivation to achieve a desired goal. (Snyder et al., 1991, p. 571). Agency in this two-factor paradigm denotes

a sense of efficacy (or "will") in pursuing one's goals, and pathways refer to the development and achievement of desired outcomes. Moreover, hope places a greater emphasis on the achievement of one's own unique goals (Bryant & Cvengros, 2004), or an anticipation of the achievement of a significant future good for a person (Leung et al., 2009). These goals can be short or long-term and may vary significantly as a function of their importance and probability attainment (Synder, 2000). As it stands, Vohs and Schmeichel (2002) claimed strong similarities between hope and self-regulation. Goals, pathways, and agency trilogy of Snyder's hope theory can be deemed as a definition with regulatory terms. Snyder's answer to the question of what makes a person hopeful in a given context was appropriate self-regulation. Besides, hope serves as a driving force for people to invest in their future like living healthily, sustaining good relationships, accepting treatment for a health problem, saving money, and succeeding in academic and/or job endeavors, etc. (Snyder, 2000).

Lazarus (1999) reflected on the overemphasis on despair and helplessness over hope, probably because of their relevance with and the clinical interest in depression and underlined the vitality of hope as a psychological resource against despair. According to him, hope is not a total wishful fantasy that the future will be full of positives for the person, but a mindset that is a mixture of distress and positive focus for the future. Having higher hope does not mean looking at the future through pink-colored glasses. On the contrary, they are the ones who are aware of the various kinds of realistic possibilities but also hold the belief that they can overcome the difficulties by active engagement, reach their goals with effort, and know that life does promise neither a rose garden nor a thorny road all the time. In a similar vein, desire and uncertainty are postulated as two core components of hope (Martin, 2011). Although hope is theorized as dispositional in nature, it can be increased via interventions like therapy, counseling, and education (Valle et al., 2006).

Hope has been meta-analytically studied in relation to a few important life outcomes like less depression and anxiety (Corrigan & Schutte, 2023), lower levels of PTSD symptoms (Gallagher et al., 2020), better academic achievement (Marques et al., 2017), better work performance and employee well-being (Reichard et al., 2013), less pain severity, better physical functioning, and lower psychological dysfunction (Shanahan et al., 2021).

2.2.3. Optimism

“Optimism is an individual difference variable that reflects the extent to which people hold generalized favorable expectancies for their future” (Carver et al., 2010, p. 1). Anticipating good or bad things to happen are the two poles of optimist versus pessimist people. According to the authors, these anticipations are related to core processes behind human behavior. Optimism may offer cognitive, coping, and contextual tools that support improved mental health. Scheier and Carver (1985) theorized optimism as a disposition, and called as “dispositional optimism”, suggesting it to be a personality trait; whereas Peterson and Seligman (1987) postulated that optimism is an “attributional style”, characterized by the belief that positive events outweigh negative ones in life. In addition, there is a tendency to believe that negative event(s) will not repeat itself, and positive events are more stable. Moreover, optimism focuses more on the general quality of predicted future results (Bryant & Cvengros, 2004).

In a recent study by Tetzner et al. (2024), it was found that optimism decreased every 10 years of age and was very stable after age 60 but tends to decline again in very old age. Moreover, higher education level revealed the most consistent association with higher levels of optimism, and gender showed study-specific differences. Moreover, Carver and Scheier (2024) elaborated on the consistent findings of the relationship between higher levels of optimism and less stress during times of adversity in life. They stated that this is not because optimists are more cheerful but because of the manner in which they address adversity. In times of adversity, optimists continue trying, engage in wishful thinking, and believe in finding a way to overcome challenges, one way or another.

A meta-analysis (Alarcon et al., 2013) with 391 independent samples found significant positive correlations between optimism and positive affectivity, self-esteem, generalized self-efficacy, resilience, perceived control, quality of life, life satisfaction, life purpose, happiness, general psychological well-being, social support, job satisfaction, and general physical health. The same study reported significant negative correlations with depression, anxiety, loneliness, PTSD, stress, suicidal ideation, health problems, and alcohol use. Optimism may promote health by

encouraging people to engage in active coping and making them believe that they will renew their efforts to reach their goals (Scheier et al., 1986).

2.2.4. Self-Esteem

Self-esteem is one of the most widely studied and oldest constructs in psychology (Donnellan et al., 2011). It refers to an overall appraisal of one's self-worth (Rosenberg, 1965). The construct is defined by how much value people place on themselves (Baumeister et al., 2003). The authors added that it is the evaluative part of self-knowledge, and high self-esteem refers to a global positive evaluation or favorable definition of the self. In other words, subjective appreciation of one's worth, successes, and competencies as a unique individual is defined as perceived self-esteem. Likewise, self-esteem is also a set of beliefs, and these beliefs shape people's actions in many important ways. However, individuals' objective talents, successes, and abilities as well as how they are evaluated by others do not necessarily reflect their self-esteem (Orth & Robins, 2014). Thus, self-esteem is a perception, not reality. In addition, Rosenberg (1965, p. 31) stated that individuals with high self-esteem do not believe that they are superior to others, they feel "good enough". Self-esteem incorporates feelings of acceptance and respect towards oneself (Ackerman et al., 2011). In his own words, Rosenberg (1989, p. 31) proposed this perspective:

When we speak of high self-esteem, then, we shall simply mean that the individual respects himself, considers himself worthy; he does not necessarily consider himself better than others, but he definitely does not consider himself worse; he does not feel that he is the ultimate in perfection but, on the contrary, recognizes his limitations and expects to grow and improve. Low self-esteem, on the other hand, implies self-rejection, self-dissatisfaction, and self-contempt. The individual lacks respect for the self he observes.

There have been several studies focusing on the positive and negative outcomes of self-esteem. For instance, a meta-analysis (Harris & Orth, 2020) of 35 longitudinal studies with 21,995 participants concluded that social relationships are affected by

self-esteem, either in positive or negative ways. Another meta-analysis of 95 longitudinal studies about the effect of self-esteem on depression and anxiety yielded significant results, and the effect was not influenced by gender and age (Sowislo & Orth, 2013). Moreover, self-esteem had moderate effects on important life trajectories like relationship and job satisfaction, based on a 12-year period of a sample of 1824 individuals from age 16 to 97 years (Orth et al., 2012). Shame, a feeling that has significant potential to undermine psychological functioning, has been found to be related to low self-esteem in a meta-analysis of 235 studies (Budiarto & Helmi, 2021). Life satisfaction is another variable that was found to be significantly related to self-esteem based on the results of a meta-analysis of 74 studies (Kurnaz et al., 2020).

2.2.5. Self-Efficacy

Being one of the basic elements of the social-cognitive theory, Bandura (1982, p. 122) defined perceived self-efficacy as “personal judgments and beliefs of how well one can execute courses of action required to deal with prospective situations”. Self-efficacy is based on an agentic perspective, meaning that people have considerable control over shaping events and the course of their lives (Bandura, 2012). He asserted that the level of perceived self-efficacy has a substantial effect on how people think, feel, and behave in certain situational conditions and domains. If one’s perceived self-efficacy is high, then he is likely to engage in specific behaviors, realize his capability, and show a better performance. If not, he might avoid the situation and/or function above his capability. Moreover, skills and knowledge alone do not predict achievement, motivation, and accomplishments without self-efficacy beliefs. According to Pajares (1996), the balance between knowledge and skills and self-efficacy is optimal and necessary for competence in tasks.

Bandura (2012) treated self-efficacy not as a general trait but as a varying system across domains and situational factors. The sources of one’s self-efficacy lie under mastery experiences, social modeling, social persuasion, and physical and emotional states. He also added that self-efficacy beliefs affect how well people establish goals for themselves, expect certain outcomes, and assign causal attributions for both their triumphs and failures. These factors have an impact on how well people motivate themselves and persevere in the face of adversity. Moreover, people’s beliefs

in their coping capabilities have a significant role in their emotion regulation, which may decrease their vulnerability to stress, anxiety, and depression.

Several meta-analyses reported significant relationships between perceived self-efficacy and perceived self-esteem; job satisfaction and job performance (Judge & Bono, 2001); self-compassion (Liao et al., 2021); less sedentary behavior (Szczyka et al., 2021; academic performance (Farid & Ashrafzade, 2020; Talsma et al., 2018); positive health practices (Yarcheski et al., 2004); job burnout (Shoji et al., 2015); chronic pain outcomes like pain severity, functional impairment, affective distress (Jackson et al., 2014), and many more results affecting daily life of people either in positive or negative ways. These variables have the potential to influence psychological well-being as well, given the fact that Ryff's model incorporates self-acceptance, autonomy, environmental mastery, etc., all of which are closely related to living a life with meaning and peace of body and mind.

2.2.6. Self-Control

For the sake of promoting the pursuit of long-term goals, self-control is commonly understood as the capacity to overcome dominant reaction inclinations, resulting in the effortful blocking of unwanted impulses and behaviors (Carver & Scheier, 1981; Metcalfe & Mischel, 1999). Trait self-control, on a dispositional level, entails an "active self" that may choose long-term goals above short-term ones, even when these short-term goals are immediately satisfying (Baumeister et al., 1998). The capacity to sacrifice short-term pleasure in favor of long-term rewards is vital to human evolution and crucial in human functioning (Tangney et al., 2004). Self-control is not only related to inhibition but also initiation that requires acting intentionally, despite initial reluctance, in a way that is compatible with the aim (De Ridder et al., 2011). Moreover, people with high self-control are better able to regulate their emotions and control their thoughts as well (Baumeister et al., 1998). The optimal level of self-control affects every domain of life and is deemed a hallmark of adaptation in life (Vohs & Baumeister, 2004).

Self-control is frequently used interchangeably with "sense of control" (or sense of personal control) in the literature. Moreover, internal locus of control is another concept that is used to refer to the extent to which people believe that outcomes

are mostly the result of their personal efforts, abilities, and behaviors rather than external forces (Rotter, 1966). The three similar concepts highlight the responsibility and ownership of one's actions as well as personal agency over their goals, accomplishments, life pursuits, etc. This belief in one's capability to control oneself motivates them to take action for behavior change rather than letting things go and attributing what happens to them to external sources like fate, luck, other people, etc. Meanwhile, self-control is mostly a value on which Western culture places extreme importance as a key component of autonomy (Marks, 2011).

Given the fact that lack of self-control is related to many problematic outcomes like impulsivity (Mao et al., 2018), obesity, criminality, procrastination (Steel, 2007), increased risk-taking (Freeman et al., 2010), various forms of aggression (Li et al., 2019), and self-handicapping (Uysal & Knee, 2012), it has both personal and social consequences. A meta-analysis with 102 independent studies by De Ridder et al. (2012) on how trait self-control relates to a wide range of behaviors showed that high self-control was associated with various behavioral domains like school and work, eating and weight, interpersonal functioning, well-being, and adjustment. A recent experimental study (Ren et al., 2024) explored the mediating effect of a sense of control between a scarcity mindset and envy, and it was reported that improving the sense of control of the participants with a scarcity mindset significantly decreased their envy and malicious motivation.

2.2.7. Sense of Coherence

Sense of coherence (SOC) contains three components: “(a) the sense that one can usually predict one's future, (b) the ability to derive meaning from important aspects of one's life, and (c) and the sense that powerful forces tend to serve one's benefit” (Hobfoll, 2002, p. 310). According to Antonovsky (1987; 1993), the salutogenic model, which takes into account the important factors for the development and maintenance of well-being and focuses on health-promoting and protecting characteristics, suggests that SOC is a crucial psychological resource disposition. Meanwhile, the SOC theory is the essence of the salutogenic approach, or salutogenesis, to health and well-being (Olsson et al., 2006). Antonovsky rejected the binary of sick or well and proposed an understanding of health as an ease/disease

continuum; total absence of health (H-) on the one pole and total presence of health (H+) on the other pole. All people fall somewhere in between, and this place is not fixed but dynamic throughout the life course. What matters is to explore what moves one towards the ease pole, that is, what promotes human well-being (Moksnes, 2021).

A sense of coherence relates to a sense that the world and oneself in the world are comprehensible (i.e., rational, understandable, consistent, and predictable), manageable, and meaningful (i.e., although life is challenging, it is worth making commitments and stay alive) (Antonovsky, 1987). Comprehensibility dimension refers to the sense of cognitive control over one's internal and external world. Manageability denotes the belief that one holds on to the availability of resources (instrumental, relational, personality, etc.) in times of need. The meaningfulness dimension denotes the motivational component in times of stress and difficulties towards moving on and continuing to be attached to one's goals and investments in life, rather than seeing them as burdens that one should try to avoid. Perception of life's difficulties as "welcomed challenges" best describes the meaningful dimension of the SOC theory (Olsson et al., 2006).

In his book (1987) *"Unraveling the Mystery of Health: How People Manage Stress and Stay Well?"*, Antonovsky attempted to understand how some people manage stress and stay well while others fall apart in the face of stress and difficulties coming from internal and/or external sources. According to him, the answer was their level of sense of coherence that made the difference. He added that SOC does not determine the observable behavior but has a considerable impact on how a person perceives and interprets the events. For the development of SOC, one needs to experience consistent controllability of situations and outcome expectancies. People with high SOC may fail to cope successfully, but this failure is not expected to cause major changes in their level of SOC. In other words, their perceptions about comprehensibility, manageability, and meaningfulness of the internal and external environment will be restored by any means.

Antonovsky (1987) formulated the SOC theory as a stable trait or a global orientation that is resistant to change but Geyer (1997) argued that it is open to change with regard to the results of available longitudinal and experimental studies. Changes

in life circumstances and major life events in either negative or positive ways may reshape people's level of SOC. Moreover, Antonovsky (1992) did not formulate SOC as a coping strategy, but people with high SOC were considered to be more flexible in choosing more adaptive coping strategies. Kuroda et al. (2007) argued that SOC is a result of learning rather than temperament or heredity, and increases with age (Lindström & Eriksson, 2005).

A limited number of meta-analyses have been published on the relationship between a sense of coherence and various health and well-being outcomes. To name the available and published ones, with lesser PTSD symptoms (Schäfer et al., 2019), more physical activity (Moyers & Hagger, 2023), lower risk of all-cause mortality (Piiroinen et al., 2020), less severe mental health problems (Schäfer et al., 2023), less job-related stress and burnout (González-Siles et al., 2022), and higher religiosity/spirituality (Jeserich et al., 2023).

2.2.8. The Interrelations between Key Individual Psychological Resources

Key individual psychological resources are not separate entities, they have some interwoven aspects. For example, resilient people are characterized by such qualities such as viewing change or stress as a challenge or opportunity, making commitments, recognizing limits to control (Kobasa, 1979); engaging the support of others, being able to form close and secure attachments to others, pursuing personal or collective goals, having enough self-efficacy, having realistic sense of control, choices, sense of humor, and action-oriented approach (Rutter, 1985); adapting more easily to change (Rutter, 1985); having optimism and faith (Connor & Davidson, 20003). As is seen, resilience incorporates other key individual psychological resources. Furthermore, self-efficacy is closely related to self-esteem or vice-versa. In the definition of a sense of coherence, the sense that one can usually predict one's future seems related to the sense of control. The operational definitions of all the seven resources above give some clear commonalities, but not overlapping. They all tap into unique skills and features but also share similar aspects.

2.3. Psychological Resources and Psychological Well-Being

Coping is the term used to describe the mechanisms and mental processes used by an individual as an adaptive response to lessen the stress brought on by a threatening circumstance (Lazarus & Opton, 1966). By predisposing people to use positive reinterpretation as a coping strategy—that is, "putting problems in the best possible light and searching for hidden benefits and meaning when difficulties arise"—optimism is hypothesized to have an impact on psychological and physical well-being (Scheier et al., 1994)

Motivation might be another mechanism underlying the link between key individual psychological resources and psychological well-being. People with higher self-efficacy, self-control, self-esteem, hope, optimism, sense of coherence, and resiliency are more likely to be motivated towards goal pursuit, engagement, self-regulation, sustainment of effort, and perseverance in different life domains such as relationships and work (De Ridder & Gillebaart, 2017).

There are hundreds of empirical studies showing the significant relationship between psychological well-being as defined and measured by Ryff (1989) with resilience (e.g., Agarwall & Malhotra, 2019; Calvo et al., 2020; Kim, 2022); hope (e.g., Muench, 2003; Qi et al., 2022; Santos et al., 2023); optimism (e.g., Mock, 2005; Tripathi, 2011; Valickas et al., 2019); self-efficacy (Hernandez-Varas et. al., 2019; Kim & Han, 2019; Roberts, 2007); self-esteem (Lee et al., 2014; Matud et al., 2022; Pierce et al., 2016); self-control (Banerjee et al., 2022; Cenkseven, 2004; Horrell et al., 2022); and sense of coherence (Pozo et al., 2014; Sarıtaş, 2019; Siqi, 2017). Except for a few studies (e.g., Cedres, 2020 for self-esteem; Cobner, 1999 for self-control; Dagang et al., 2022 for self-esteem; Eroğlu, 2020 for self-esteem; Joshanloo et al., 2021 for self-control; Malekitabar et al., 2017; Margaca et al., 2021 for resilience; Masood et al., 2022 for hope; Tripathi et al., 2011 for optimism), the results of the studies reported that as one's level of resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence increase, overall psychological well-being also increases. Despite the plentitude of these studies, there isn't any meta-analysis for any of the key individual psychological resources and psychological well-being (searched on August 28, 2023, via EBSCOHost, Scopus, Web of Science,

TRDizin, Proquest Dissertations, Google Academic, and The Council of Higher Education Thesis Center).

2.4. Moderator Variables

In the current study, to understand the potential heterogeneity of the effect sizes between the studies, various moderator variables were used. Firstly, the effect sizes may differ by means of the publication year of the study because the development of the PWB model by Ryff (1989a) does not date back to old times. The sprout of psychological well-being studies dates back to the late 2000s, and there was a dramatic increase in the following years. Moreover, changes and developments in the world (e.g., social media) through the years may have affected the strength of the links between key individual psychological resources and psychological well-being. Moreover, Lomas et al. (2019) used publication year as a potential moderator as well in their meta-analysis on psychological well-being, although they did not find any significant moderating effect.

The sample size is another moderator that was included as a potential moderator for the current study. There are differential results regarding the moderating effect of sample size in meta-analyses on psychological well-being (e.g., Houben et al., 2015; Koydemir et al., 2021; Tejada-Gallardo et al., 2020). The sample size is an important covariate in the meta-analysis because effect sizes are sensitive to sample sizes in such a way that small and large numbers of sample sizes tend to produce higher effect sizes (Borenstein et al., 2009).

The age group was another potential moderator that was explored, and the participants were divided into two groups: university students and others (adults, elders, etc.). This moderator was used in some of the meta-analyses on psychological well-being (e.g., Gray et al., 2017; Lomas et al., Oliver, 2009). Springer et al. (2011) tested longitudinal age variations in Ryff's model of psychological well-being, and they reported that there is significant variation between ages or periods on the dimensions of the PWB Scales.

The key individual psychological variables in the studies included were measured with a variety of assessment tools. Although they measure the same

construct, some of the scales might have stronger psychometric qualities, and be widely used across different countries whereas others were less known and used only in a few studies. Tang et al., 2020 also looked for potential moderator effects of the tools used in their meta-analysis on well-being.

The country of origin of the participants for each study was also taken as a potential moderator and this covariate was categorized as Western and Eastern countries based on the geographical region of the country. Joshanloo (2014) compared and contrasted Eastern and Western understanding of a good life and optimal functioning and elaborated that these two basic cultural dimensions differ on many dimensions of psychological well-being. Lomas et al. (2019) found significant differences in their meta-analysis on psychological well-being regarding geographical regions.

Table 2.2. *Cultural Dimensions and Their Descriptions*

Cultural Dimensions	Description
Power Distance	The extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally.
Individualism	The extent to which people feel independent, as opposed to being interdependent as members of larger wholes.
Motivation towards Achievement and Success	A highly competitive society's preference for achievement, heroism, assertiveness, and material rewards for success.
Uncertainty Tolerance	Deals with a society's tolerance for uncertainty and ambiguity. It has to do with anxiety and distrust in the face of the unknown, and conversely, with a wish to have fixed habits and rituals, and to know the truth.
Long-Term Orientation	Deals with change. In a long-time-oriented culture, the basic notion about the world is that it is in flux, and preparing for the future is always needed.
Indulgence	Is about the good things in life. In an indulgent culture, it is good to be free. Doing what your impulses want you to do, is good. Friends are important and life makes sense.

Exploring psychological well-being from a culturally informed perspective is a necessity, as in many matters. To explore heterogeneity among studies, it aims to go beyond the Eastern and Western binary and use a more nuanced picture of cultural dynamics on a country basis. For this purpose, the Hofstede Insights country comparison tool was utilized to obtain current scores on six dimensions (power

distance, individualism, motivation towards achievement and success, uncertainty tolerance, long-term orientation, and indulgence) of cultural values of a country. The data have been updated in 2003. The dimensions are defined above in Table 2.2. More information about the scores of countries on each cultural dimension is shown in Appendix C.

Coping strategies (Matsumoto et al., 1999), subjective well-being (Arrindell et al., 1997), psychological well-being (Mohammed et al., 2010), happiness (Steel et al., 2018), and emotional well-being (Basabe et al., 2002) were found to be significantly moderated by cultural dimensions. Psychometric findings (Scholz et al., 2002) from 25 countries regarding the configurable equivalency of the “General Self-Efficacy Scale” suggested the globality of the underlying construct but they pointed out some cross-cultural differences like culturally defined gender roles. In other words, a scale may be internally consistent and reliable across nations, but this does not reveal cultural nuances on the construct that are assessed.

2.5. Summary of the Literature Review

Positive psychology has paved the way for a paradigm shift in the conceptualization of health from “absence of illness” to “a state of complete physical, mental, and social well-being”. Focusing on human strengths rather than deficits is the basic tenet of positive psychology, and research on human well-being has flourished as the approach has begun to gain attention from the scientific community.

Well-being has been studied from two traditions: subjective well-being (hedonic approach) and psychological well-being (eudaimonic approach). The former focuses on the subjective evaluation of one’s quality of life and the proportion of experiencing positive feelings over negative ones. On the other hand, the latter deals with the human potential to live a more fulfilling life. Although both traditions are related to one’s well-being, they are different from but complement each other (Keyes et al., 2002). This meta-analysis is based on the eudaimonic approach and the psychological well-being theory of Ryff (1989a). Ryff conceptualized psychological well-being with 6 dimensions consisting of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth.

The strength-based approach of psychological well-being as a key concept of positive psychology has guided the scientific community to examine resources (personal, social, instrumental, etc.) as crucial agents for human well-being. The approach claims that all people have an inherent capacity for various inner resources like resilience, self-efficacy, self-esteem, etc. If those resources are mobilized or if people become aware of their resources, then this gives great opportunities for better functioning in life. Psychological resources are one of the key resource sets that originate from internal human resources. Seven of them are identified as key individual psychological resources (Hobfoll, 2002), namely, resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence. This meta-analysis study focused on the relationship between these seven key individual resources and psychological well-being (as conceptualized and measured by Ryff, 1989a).

There are various individual studies linking the key individual psychological resources with psychological well-being. Nearly all of the studies available to the researcher showed positive relationships between them. To synthesize the individual studies and reach an overall conclusion about the extent of these relationships will provide a broader picture of the results. Meanwhile, these key individual resources have some common features, but they all have their unique features as well. Among them, resilience has a special place in the sense that it incorporates several other resources like a sense of control and self-efficacy.

CHAPTER 3

METHOD

This chapter provides an overview of the design of the study, including an explanation of study variables, criteria for inclusion and exclusion of the studies, and the main steps of the literature search. It details the results of the literature search, the coding process for primary studies, and the analytic procedures used for effect size calculations and statistical analysis. Additionally, the chapter discusses the limitations of the study.

3.1. Research Design

The objective of the current meta-analysis was to explore the extent of the relationship between key individual psychological resources and psychological well-being, utilizing correlational design. According to Fraenkel et al. (2018), correlational design allows researchers to examine the complex relationships among the variables. Meta-analysis, a statistical technique, is a quantitative method that uses and synthesizes data from multiple individual studies to arrive at one or more conclusions (Borenstein et al., 2009). Meta-analysis can be conducted to explore the strength of the relationships among the variables.

3.2. Study Variables

The main variables of the study include PWB (as formulated by Ryff, 1989a) and seven key individual psychological variables: optimism, self-efficacy, self-esteem, self-control, hope, sense of coherence, and resilience. The scores for all the variables were computed as total scores in the studies. Only the PWB Scales (Ryff, 1989a) should measure PWB whereas there is no constraint regarding the use of various questionnaires for the measurement of key individual psychological resources.

Moreover, the moderator variables in the study are:

- 1) Publication year of the study (in years),
- 2) Sample size (in numbers),
- 3) Age group (university students versus others),
- 4) Country of origin of the participants (Western or Eastern country based on the geographical region),
- 5) A version of the PWB scales used (original or adapted version),
- 6) Frequency of the usage of the scales that are used to assess key individual psychological resources (frequently used or infrequently used),
- 7) Hofstede's six cultural dimensions (power distance, individualism, motivation towards achievement and success, uncertainty avoidance, long-term orientation, and indulgence). All these dimensions are continuous variables, and the scores ranged between 0-100 for each dimension. The higher the score, the more a country is identified with that cultural value (e.g., individualism).

3.3. Inclusion Criteria

In the selection of the studies, several inclusion criteria were employed. Only the studies having all the criteria listed below were included in the meta-analysis.

- 1) Quantitative studies (including only peer-reviewed published research articles, dissertations, and theses)
- 2) The studies should be correlational and/or descriptive regarding research design.
- 3) The studies that are published in English or Turkish and are available in full text.
- 4) The studies that were published between 1990 and 2023 (Ryff developed the PWB model and the scales in 1989).
- 5) The studies in which effect size or the statistics necessary to calculate effect size (such as correlation coefficients) are reported.
- 6) The studies in which the relationship between any of the key individual psychological resources and the total score of psychological well-being are reported.

- 7) The studies in which psychological well-being is measured using the PWB Scales developed by Ryff (1989a), either the long-form and/or the short-form developed by Ryff and Keyes (1995).
- 8) The variables should be reported as composite scores.

In addition, no more than one effect size was included if a study reported multiple effect sizes for the same independent and dependent variables.

3.4. Exclusion Criteria

In the selection process of the studies, several exclusion criteria were employed. Only the studies met all the criteria listed below were included in the meta-analysis:

- 1) Conference proceedings and book chapters were excluded.
- 2) Studies involving clinical samples were excluded.
- 3) Studies involving participants who were children or adolescents were excluded. This is because assessment tools for PWB with Ryff's model are unavailable for children and adolescents.
- 4) Studies in which correlation coefficients between key individual psychological resource(s) and psychological well-being were reported on a scale basis were excluded.
- 5) Studies in which PWB is measured using tools other than Ryff (1989a)-long form and Ryff and Keyes (1995)-short form were excluded.
- 6) Experimental and longitudinal studies were excluded.

3.5. Main Steps of the Literature Search

The data for the study covered published peer-reviewed articles, unpublished dissertations, and theses, all in full text and written in English and/or Turkish. A comprehensive literature search from 1990 to 2023 was employed. The rationale for starting the literature search in 1990 is that Ryff developed the PWB model and scales in 1989(a).

Several retrieval tools were used to identify target studies. Initial searches were conducted via electronic databases. Academic Search Premier (EBSCOhost) which includes a collective list of databases from different disciplines (for this meta-analysis,

including Academic Search Ultimate, The Belt and Road Initiative Reference Source, Sociology Source Ultimate, Education Source, APA PsycArticles, Business Source Ultimate, Central & Eastern European Academic Source, MasterFILE Complete, MEDLINE, ERIC), Web of Science, Proquest Database, and TR Index (TRDizin). To represent unpublished studies, the National Thesis Center (NTC) provided by the Council of Higher Education and ProQuest Thesis and Dissertations databases were also checked. The former database covers nearly all dissertations and theses completed in Türkiye, the latter database includes many dissertations and theses completed in various countries, primarily the USA and UK. To ensure that no studies were missed, Google Scholar and the reference lists of related studies were also checked. Full texts of some of the relevant studies were not available in the databases but they were accessible through Research Gate. In other words, the records of the studies were found in databases and/or in the reference lists of articles, but the full texts of those studies were downloaded from Research Gate. For a few articles, the full texts were requested through Research Gate by using the “Request Full-Text” button to contact the author(s) of the study. Nearly all the authors responded to the requests and provided the full texts. However, correlation coefficients were not reported by the authors in a few target studies. For these studies, e-mails were sent to the corresponding authors but only one replied, stating that she had lost the data and was unable to recalculate correlation coefficients.

3.6. Results of the Literature Search

Figure 3.1. summarizes the basic steps of the study acquisition process described in the flowchart below. The inquiry was conducted using combinations of keywords with Boolean operators (e.g., AND and OR) and truncation symbols (e.g., “and *). Truncation symbols give the exact phrases or words so that irrelevant ones are excluded from the search process. The Boolean operator enables to combine different sets of phrases and words in a single search. Different databases require different search strategies. I used six sets of search strategies for the acquiring the relevant studies:

1) For the EBSCO database

"psychological * well-being" OR "well-being" OR "wellbeing" OR
"eudaimonic * well-being" OR "eudaimonic" OR "eudaimonic * wellbeing" OR
"psychological * wellness" OR "wellness" **[IN ALLTEXT]**

AND "psychological * well-being * scale" OR "psychological * wellbeing *
scale" OR "wellbeing * scale" OR "well-being * instrument" OR "wellbeing *
instrument OR wellness * scale" OR wellness * instrument" **[IN ALL TEXT]**

AND "Ryff" OR "Keyes" **[IN ALL TEXT]**

AND "self-esteem" OR "self-efficacy" OR "resilience" OR "hope" OR
"optimism" OR "control" OR "locus * of * control *" OR "self * control" OR
"psychological * capital" OR "core* self* evaluations*" OR "resource" OR
"hardiness" OR "protective * factors" **[IN ALLTEXT]**

2) For the Web of Science Database

"self-esteem" OR "self-efficacy" OR "hope" OR "locus of control" OR
"resilience" OR "core self-evaluations" OR "hardiness" OR "psychological
capital" OR "psychological resources" OR "self-control" OR "control" OR
"optimism" OR "sense of coherence" **[ALL FIELDS]**

AND "psychological well-being" OR "psychological wellbeing" OR
"eudaimonic well-being" OR "eudaimonic wellbeing" OR "psychological
wellness" OR "wellness" **[ALL FIELDS]**

In the Web of Science database, there is no option to search on an "all text"
basis. Therefore, I did not include "Ryff", "Ryff and Keyes", and other
keywords regarding assessment details to not narrow the scope of the studies.

3) For Proquest Database Including Dissertations and Theses

Abstract (psychological well-being) OR (psychological wellbeing) OR (well-
being) OR (eudaimonic) AND ft (PWB) AND ft (PWB Scales) OR (PWBS)
OR (Psychological Well-Being Scales) AND abstract(self-esteem) OR (self-
efficacy) OR (resilience) OR (hope) OR (optimism) OR (control) OR (locus of
control) OR (self-control) OR (psychological capital) OR (core self-

evaluations) OR (resource) OR (hardiness) OR (protective factors) AND full text (Ryff) OR (Ryff and Keyes) OR (Ryff & Keyes)

4) For National Thesis Center (NTC) provided by the Council of Higher Education

The keywords of “psychological well-being”, “psychological wellbeing”, “wellbeing”, “psikolojik iyi oluş” and “psikolojik iyi oluş” was used as the search strategy. Then, all the results were checked one by one for relevance to the independent variables and PWBS.

5) For TR Index

Öz: (psikolojik AND iyi oluş)

Abstract: (psychological AND well-being)

Abstract: (psychological AND well-being)

Exclusion of the studies was performed on various levels. Firstly, the method section of the studies was checked to whether the PWBS (including long and short versions) was utilized to measure psychological well-being. Secondly, the age group of the participants was controlled, and studies including participants younger than 18 were excluded. Thirdly, the studies that used only some of the subscales of the PWBS as a composite score were excluded. For instance, some studies used only 2 or 3 subscales of the PWBS and claiming that they were measuring PWB. In other words, they divided the PWBS without giving any rationale and claimed that this constituted an indicator of PWB. However, according to Ryff’s model, PWB is composed of the composite of all six subscales. Fourthly, the correlation table(s) were checked, if available, for the presence of correlation coefficients between the total score of the PWBS and independent variable(s). Many studies did not report the correlation tables or reported them only on a subscale basis for PWB and/or independent variable(s). Lastly, duplicate studies were eliminated, including overlaps among articles, theses, and dissertations.

After the exclusion of studies, 170 studies remained for the inclusion in the meta-analysis. Consequently, 251 effect sizes from these 170 studies constituted the final sample for the meta-analysis.

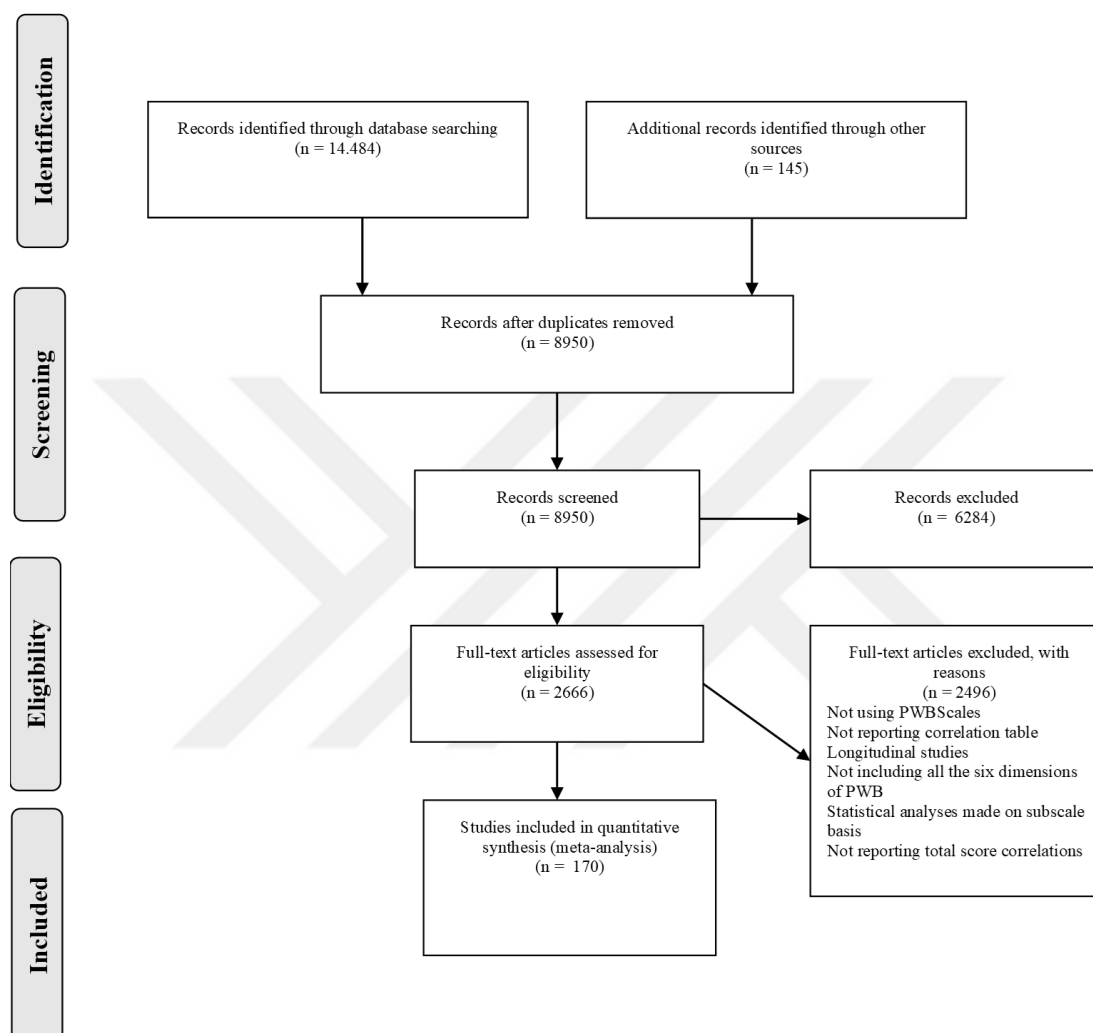


Figure 3.1. Study Acquisition Process

From: Moher D., Liberati A., Tetzlaff J., Altman D.G., & The PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med* 6(7), e1000097. <https://doi.org/10.1371/journal.pmed1000097>

3.7. Coding Process

The basic tool in a meta-analysis is a coding sheet, which comprises several elements regarding the primary studies. This tool helps to capture the important aspects of each study that pertain to the calculation of the effect size or moderator variables that might have an impact on the effect size. The following processes were used to generate the coding sheet for this meta-analysis:

- Various coding sheets from other meta-analysis studies were reviewed.
- Potential moderator variables were examined through other research syntheses about psychological well-being.
- A 33-item first draft of the coding sheet was created.
- The initial edition of the coding sheet was reviewed by three professionals in the field of educational studies (One from the Program of Measurement and Evaluation, and two from the Program of Psychological Counseling and Guidance).
- Based on feedback on the initial draft, a second draft of the coding sheet was developed.
- The second draft of the coding sheet was reviewed by the thesis supervisor and two additional specialists.

After revisions, the final coding sheet included 17 items to be coded. These items are as follows:

- 1) The author(s) along with the year of study (e.g., Agarwall & Malhotra, 2019)
- 2) Name of the key individual psychological resource (e.g., optimism)
- 3) Type of the study (e.g., article, thesis, dissertation)
- 4) Sample size of the study (e.g., N=120)
- 5) Age group of the participants (university students, adults, elders, etc.)
- 6) The correlation coefficient between key individual psychological resource(s) and PWB (e.g., $r = .550$)
- 7) Country of origin(s) of the study sample (where the study was conducted)
- 8) Year of data collection, if available
- 9) Sample characteristics of the study (e.g., mental health professionals)
- 10) Age range of the study participants, if available
- 11) Age average of the participants, if available
- 12) Gender distribution of the study sample, if available
- 13) Country of origin of the participants (Western versus Eastern countries)
- 14) Hofstede's scores on six cultural dimensions by country (power distance, individualism, motivation towards achievement and success, uncertainty tolerance, long term orientation, and indulgence)
- 15) PWB Scales used (Adapted or original version)

- 16) The name and reference of the scale used to measure the key individual psychological resource (e.g., Rosenberg Self Esteem Scale; Rosenberg, 1965)
- 17) The frequency of usage of the measurement tool used to assess key individual psychological resource

3.8. Analytic Procedures and Effect Size Calculations

A random-effects model was chosen to calculate the overall effect sizes (for all and each of the key individual psychological resources) based on the idea that true effects could vary among studies due to factors other than sampling error, such as participants' education level, age, and sample size. Borenstein et al. (2009) assert that if effect sizes are assumed to be random, then the random-effects model must be used in meta-analysis. Multiple effect sizes were extracted from a considerable number of the primary studies ($N= 35$), meaning that the independence of effect sizes was not assured. Sample dependency is a serious threat to the validity of the results of any meta-analysis (Şen & Akbaş, 2016). To deal with this problem, three-level (or multilevel) meta-analysis was employed to answer the first research question regarding the extent of the relationship between key individual psychological resources and psychological well-being. From research question two through eight, a two-level meta-analysis was used. For main and moderator analyses related to the first research question, the effect sizes were computed using multivariate meta-analyses with the metafor package (Viechtbauer, 2010) in R program. For subgroup main and moderator analyses, the CMA Program (version 4.0) was utilized.

3.9. Statistical Analyses

For the main group analysis (research question one), a three-level meta-analysis was utilized to analyze the data. This statistical technique incorporates all available data while accounting for dependencies between effect sizes (e.g., effect sizes derived from the same sample in a study). In traditional unilevel meta-analysis, it is required that effect sizes in the data set are independent from each other (Assink & Wibbelink, 2016), which can only be achieved by including only one effect size from a single study (Lipsey & Wilson, 2001). Therefore, extracting more than one effect size from a primary study brings up the issue of interdependency, meaning that the effect sizes are calculated based on the same participants. The literature has offered diverse

solutions to this dependency problem, each with its limitations. However, a three-level meta-analysis has been deemed a better solution compared to the earlier methods for addressing this issue (Cheung, 2014; Hox, 2010; Van den Noortgate et al., 2013).

In the three-level meta-analytic models, variances are formulated from three different sources: the sample variance of the effect sizes (level 1), the variance between the effects sizes within studies (level 2), and the variance between studies (level 3) (Cheung, 2014). The significant presence of level 2 and level 3 variances makes moderator analyses possible to examine whether this effect is influenced by covariates such as sample size, sample characteristics, country of origin of the participants, etc. The statistical environment R (version 3.3.0, R Core Team, 2015) was utilized to develop the multilevel models. The syntax described by Assink and Wibbelink (2016) was applied to implement the multilevel approach to meta-analysis, as outlined by Cheung (2014). Main meta-analysis and moderator analyses for the first research question were performed in R due to sample dependency, using the “*rma.mv*” function from the metafor package of Viechtbauer (2010). In all analyses, a 5% significant level was used. To examine the heterogeneity, the log-likelihood-ratio tests were employed to determine the significance of variance between effect sizes (level 1), within-study variance (level 2), and between-study variance (level 3).

The meta-analyses of the relationship between seven key individual psychological resources and psychological well-being were conducted using Comprehensive Meta-Analysis (CMA) Program Version 4.0 (Borenstein et al., 2024). Each key individual psychological resource constituted a subgroup. The random-effects model was employed for both main and subgroup analyses, assuming that the studies in the meta-analysis are a random sample from a population of potential studies (Borenstein et al., 2009).

Regarding the effect size index, Pearson Correlation I from the *r* family was used. The R program gives mean effect sizes in Fisher’s *z* format, all of which were converted to Pearson’s correlation *r* by using a website effect size converter (<https://www.escale.site/>). Pearson’s correlation *r* is most commonly used effect size in the CMA program for correlational studies. Summary effect sizes for all the main and subgroup analyses were interpreted according to the criteria of Cohen (1988). Cohen

(1988) establishes three cut-off points for small, medium, and large effect sizes in r as 0.10, 0.30, and 0.50 correspondingly. This facilitates the evaluation of effect size values.

To describe the variation, the extraction of the true between-studies variation from observed variation mechanism, known as heterogeneity, two criteria were used in CMA; the Q test (Borenstein et al., 2011) and the I^2 index. Based on the results of the Q statistic (p), the between-studies variance (Tau Squared; T^2), the between-studies standard deviation (Tau; T), and the ratio of true heterogeneity to total observed variation (I^2) are calculated (Borenstein et al., 2009). For interpreting I^2 value, Cooper and Hedges' (2009) criteria were adopted: low heterogeneity (25%), medium heterogeneity (50%), and large heterogeneity (75%).

To explore potential sources of heterogeneity among the studies, moderator analyses were conducted. Meta-regression analyses were employed for moderator analyses in the R program (multilevel meta-regression). For categorical moderators, the analog to ANOVA was used, while for continuous moderators, univariate meta-regression analyses were conducted in CMA, as recommended by Borenstein et al. (2009). Even if the heterogeneity is accounted for among the effect sizes, the possibility of "residual heterogeneity" cannot be ignored, meaning that the assumption of explaining all sources of heterogeneity may not be reasonable (Thompson & Higgins, 2002).

3.10. Missing Data and Approaches to Deal with the Missingness

Sutton and Pigott (2005) listed different levels of potentially missing data from a study: (1) missing whole studies, (2) missing outcomes, (3) missing subgroup-specific analyses, (4) missing study data required for the meta-analysis, and (5) missing data on individual study subjects. Missing whole studies such as unpublished reports, master's theses, doctoral dissertations, and non-peer-reviewed studies, are more common since the reviewers often include only peer-reviewed publications. On the other hand, the success of any meta-analysis strongly depends on the quality and completeness of the primary studies included in the synthesis.

Another bias in the publication process in the social sciences is that journals are biased toward publishing studies that report significant effects and/or associations. Additionally, authors may be less likely to submit studies to journals that fail to reject the null hypothesis. Furthermore, author(s) of the review studies may include studies in a biased manner (Dickersin, 2005). This tendency poses a considerable threat to the validity of the results or conclusions drawn, especially from meta-analyses and systematic reviews. The selection of the studies according to their significance and exclusion of the ones with low effect sizes and/or non-significant is referred to as publication bias in meta-analysis (Rothstein et. al, 2005). Several statistical methods are available for assessing publication bias including the funnel plot, regression and rank correlation, fail-safe N , and the trim and fill method.

To being with, the funnel plot is a simple scatter plot of the estimated effect sizes from individual studies against a measure of true effect size in the population. In other words, the funnel plot compares the precision and results of the individual studies. The term “funnel plot” derives from the fact that as the sample size of the studies in review increases, the precision of the estimation in effect sizes also increases (Sterne & Egger, 2001). The funnel shape consists of small studies scattered widely at the bottom of the vertical axis, while larger studies are spread more narrowly towards the end of the funnel.

If the plots (effect sizes for each study) resemble a symmetrical inverted funnel, then it can be said that the studies are free from publication bias. According to Borenstein (2005), in the presence of publication bias, the bottom of the plot would show a higher concentration of studies on one side of the mean effect size compared to the other. Especially, if at and/or to the right-hand side bottom of the funnel includes more effect sizes, it indicates that there are many studies with small samples and large effect sizes. This might imply the inflation of the effect sizes, which is a serious indicator of publication bias. Another scenario suggesting for publication bias is when the left-hand side at the bottom of the funnel includes fewer studies or none at all compared to the right-hand side. This might be due to the fact that studies with small samples and small effect sizes were not published and/or discarded by the researcher(s).

Additionally, in the absence of publication bias, the effect sizes will be scattered symmetrically around the mean effect size. In other words, if the funnel plot is actually symmetric, the distribution of effect sizes for both small studies at/to the bottom, and large studies will be balanced at the top of the funnel for both sides. If there are more studies with small samples and large effect sizes than with large samples and large effect sizes, this might be an indicator of publication bias. However, asymmetrical funnel plots may also stem from other reasons such as small studies with less methodological rigor, overestimation of effect sizes in smaller studies, rather than solely from publication bias. In other words, an asymmetrical funnel plot does not necessarily guarantee a publication bias or serve as definitive proof of bias. Sterne et al. (2005) recommended viewing the funnel plot as a generic tool for examining “smaller study effects”-the phenomenon where studies with small sample sizes may produce larger effect sizes- rather than as a definitive diagnostic for publication bias. Furthermore, Sterne et al. (2005) add that while visual inspection of funnel plots is subjective appraisal of the evidence for smaller study effects, it remains necessary and useful for detecting publication bias. In addition to the funnel plot, the authors propose to consider formal and objective methods to assess publication bias more comprehensively.

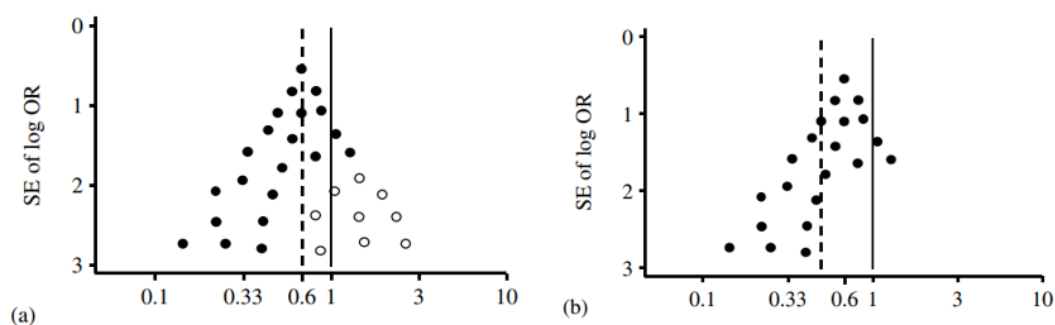


Figure 3.2. Hypothetical Funnel Plots: (a) symmetrical funnel plot indicating no publication bias (open circles shows smaller studies necessary but not beneficial effects for imputation); (b) asymmetrical funnel plot in the case of publication bias (smaller studies are missing). (The figures are from Sterne et al., 2005)

Begg’s and Mazumdar’s (1994) rank correlation method for inspecting publication bias relies on Kendall’s rank correlation, while regression method is based

on Egger's (1997) linear regression. In the absence of publication bias, p value from these tests must be higher than .05. Sterne et al. (2005) compared the two methods using a sample of 78 meta-analyses and concluded that the regression method was more powerful in detecting publication bias. Borenstein (2005) recommended that Egger's test should be used only if the analysis includes a wide range of study sizes and if the overall effect size is at least medium.

Failsafe N , or file drawer analysis, and formula was introduced by Rosenthal (1979) to estimate the number of non-significant studies that the authors may have omitted from their synthesis. Rosenthal's Failsafe N method estimates if there is any additional study (the effect sizes of these studies are assumed to be zero) that should be added to make the effect not statistically significant. Other approaches include Orwin's (1983) failsafe N and Fisher's (1982) combined significance tests. Orwin's failsafe N method considers how many hidden studies, which would yield a zero-effect size, are needed to shift the overall mean effect size to a level other than zero (Borenstein, 2005). Even though failsafe N method seem very practical, it is prone to misinterpretation and misuse. Additionally, there is no statistical criterion to evaluate the interpretation of its results, and different versions of the method can generate varying failsafe numbers. Although this method is one of the earliest and most popular approaches for addressing publication bias, it has considerable drawbacks. Therefore, other informative methods should be prioritized for examining publication bias (Becker, 2005).

The last method for publication bias is the "trim and fill" method, which estimates and adjusts a meta-analysis for the potential effect of missing studies on summary effect (Duval & Tweedie, 2000a, 2000b). In simple terms, this method involves trimming "the asymmetric" right hand side of a funnel plot which is supposed to be affected by publication bias. It then estimates the true centre of the funnel by assessing the number of studies in this outlying area. This produces a final true overall estimate and a variance by imputing the missing studies and recomputing the effect size at each iteration until the funnel plot becomes symmetric. The adjusted true overall estimate can be equal to, smaller than, or larger than the original overall estimate (Duval, 2005). Borenstein (2005) argued that the major advantage of this method is its ability to provide an estimate of the effect size after accounting for

potential bias. If the shift of the effect size between observed studies and the imputed studies is trivial, then the author(s) can be more confident about the validity of the results.

In the current meta-analysis, several databases were used to retrieve as many primary studies as possible. However, this approach does not guarantee that all relevant studies were identified due to potential shortcomings in search strategy or presence of publication bias. Among the studies included in the meta-analysis, there were no missing data existed regarding coding categories, except for cultural values dimensions. This exception occurred because four studies involved participants from diverse countries of origins, making it impossible to assign scores for each dimension on a country basis. The country comparison tool allows scores for each dimension on a country basis. Moreover, there were studies that failed to report related outcomes required for this study (missing outcomes), resulting in their exclusion from the meta-analysis. To deal with missing whole studies, and visual inspection of funnel plot (as a rule of thumb in meta-analysis), all the aforementioned methods were employed to explore potential publication bias for the first eight research questions.

3.11. Limitations of the Study

Firstly, 48 studies were excluded from this meta-analysis because they did not report the correlation table between key individual resource(s) and psychological well-being. Although these studies provided main results (such as t-values and beta coefficients) from analyses like multiple linear regression and structural equation modeling, they did not include the necessary correlation coefficients. This omission could be due to several reasons, such as page limitations of journals, the author(s)' preferences, editor's and/or reviewer(s)' comments regarding the redundancy of information, which made it impossible to be represented in this meta-analysis.

Moreover, 62 studies reported correlation tables based on subscales of PWB and/or key personal psychological resource(s). Despite sending several e-mails to the corresponding authors of these studies to request the correlation coefficients for total scores, data could not be obtained. One author replied that the study was published a long time ago and they do not have the data to recalculate the correlation coefficients, while the rest did not reply. Since this meta-analysis was designed to cover studies in

which correlation coefficients were given based on total scores of the scales, a total of 110 studies had to be excluded. The inclusion of these studies might have impacted the results regarding the main effect size, publication bias, and heterogeneity of the studies, though the exact impact remains unknown.

The most important limitation of this meta-analysis is the inclusion criteria, which restricted the analysis to only published and unpublished (theses and dissertations) studies in full text that are written in either English or Turkish. This restriction means that numerous studies published in other languages were not represented due to the language barrier. Additionally, the studies with only English abstracts were excluded, as the necessary information could not be obtained from abstracts alone. As a result, the findings of this meta-analysis are limited to a specific group of studies, which affect the generalizability of the results.

Moreover, some studies, both published and unpublished theses and dissertations, were inaccessible through databases and websites used in this research. It was noted that both Google Academic and various databases do not encompass all available studies. A group of studies that were identified through the reference parts of other studies were neither indexed in databases nor available in the websites of the journals where they were published, possibly because the journals are no longer active or have inactive websites. In summary, missing studies due to researcher's constraints and/or technical issues can be considered as a limitation of this meta-analysis.

Another noteworthy limitation is that the majority of the studies included in this meta-analysis comprised participants who are either educated or currently in education and predominantly from urban areas. This homogeneity in sample characteristics limits the generalizability of the results. When interpreting the results, these factors should be kept in mind.

CHAPTER 4

RESULTS

This chapter starts with the presentation of descriptive information about the studies included in the meta-analysis. A comprehensive table was constructed including details such as author(s), year of publication, correlation coefficient, sample size, sample characteristics, gender distribution, age range and/or mean of the participants, country of origin of the participants, version of PWB Scales used (adaptation or original), and the scale used to measure each key individual psychological resource for each study. Subsequently, findings for each research question were reported.

4.1. Descriptive Summary of the Primary Studies

In Appendix D, all the descriptive information including the author(s) name, year of the study, type of personal psychological resource, correlation coefficient (effect size), sample size, sample characteristics, gender distribution, age range, and/or mean age of the participants, country of origin of the participants, and the name of the scale chosen to assess key individual psychological resource were presented. Publication year of the study, age group (university students and others), categorical sample size (below and equal to the median and above the median), cultural background of the participants based on the country of origin of the participants (Western or Eastern), PWB Scales adapted, or original version used and the frequency of the key individual psychological resources scales (infrequently used and frequently used) were tested as potential moderators. In addition to these descriptive variables, each primary study was scored for each Hofstede's six cultural dimensions concerning the country of origin of the participants. The data were not presented in Appendix C but were summarized in the form of frequencies. The 2023 scores for each six cultural dimensions on a country basis can be obtained via the website <https://www.hofstede-insights.com/country->

comparison-tool. Some of the studies were repeated more than once in the table and with the same key individual psychological resource because the participants of the sample were grouped and analyzed based on specific characteristics. For instance, in some studies, correlation coefficients were reported on the same key individual psychological resource for males and females separately.

To begin with, the year of publication, the studies in this meta-analysis were conducted between the years 1990 and 2023. Four studies were conducted in the 1990s, 12 of them in the 2000s, 74 of them in the 2010s, and 80 of them in the 2020s. This indicates that empirical studies on key psychological resources and psychological well-being have started to flourish since the beginning of the 2010s. Of the seven key personal psychological resources, 46 of the main studies were about self-esteem, 15 of them about self-control, 35 of them about optimism, 28 of them about hope, 58 of them about resilience, 10 of them about a sense of coherence, and 43 of them about self-efficacy. The total number of studies here exceeds the number of 170 because several main studies included more than one key individual psychological resource. Among the seven key individual psychological resources, resilience, self-esteem, and self-efficacy were the most widely studied key individual psychological resources respectively, whereas the sense of coherence and self-control were studied less frequently, respectively. The correlation coefficients ranged from $-.254$ and $.929$. Moreover, although not shown in Appendix D, of the 170 studies, 14 were master's theses and 22 were doctoral dissertations.

Sample sizes of all the studies ranged from 32 and 9650 with the total sample size for all 170 studies aggregated at 64.253. Among the 251 effect sizes, the participants included 52.138 females, and 32.405 males, totaling 94.825 individuals. The effect sizes ($N=251$) were computed from samples with various characteristics, most of them being university students ($N=95$). Among these 251 effect sizes, information regarding the gender distribution of the sample was not available for some of the studies ($N=24$). Furthermore, gender distribution among studies varied: some studies favored men ($N=25$), others favored women ($N=79$), some had a balanced gender distribution ($N=82$), some included only men ($N=18$), others included only women ($N=20$), and a few studies included various gender identities ($N=3$). However, nearly any study that asked about their participants' gender orientation used a binary

approach. The age range of the participants changed between 18 to 106, some of the studies did not mention about age range ($N=67$) and/or average age ($N=71$), and some of the studies did not give any information about age characteristics of the sample ($N=18$). The remaining 95 studies gave detailed and clear information about the age range and mean age of the participants.

Regarding the country of origin of the participants, the studies represented a diverse geographical spread: 62 were conducted in Asia, 51 in Europe, 45 in North America, 7 in Australia, 3 in Africa, 1 in Australia, and Europe combined, 1 across all continents except Antarctica. The majority of the participants were recruited from Asian countries, that is WEIRD (Western Educated Industrialized Rich Democratic) samples ranked number two. Lastly, the key personal psychological resources were mostly measured with the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) for resilience, The Adult Hope Scale (Snyder et al., 1991) for hope, The Life Orientation Test-Revised (Scheier et al., 1995) for optimism, Rosenberg Self-Esteem Scale (Rosenberg, 1965) for self-esteem, The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) for self-efficacy, The Locus of Control Scale (Rotter, 1966) for self-control, and Sense of Coherence Scale (Antonovsky, 1987) for sense of coherence. The Psychological Capital Scale (Luthans et al., 2007) was another frequently used measurement tool to measure resilience, optimism, self-efficacy, and self-esteem as a composite score.

The median number of the sample sizes was computed as 200. Ninety-three effect sizes were from samples lower than 200 participants whereas 128 of them were from samples equal or above the median. One hundred twenty-three effect sizes were from Eastern countries and 128 of them from Western countries. Ninety-five samples constituted university students only and 156 samples included others (young adults, adults, senior adults, elders). Adapted version of PWB Scales were utilized in 87 of the effect sizes and original version was used in 164 of them. Lastly, key individual psychological variables were assessed with frequently used measurement tools in 180 of the effect sizes whereas in 71 of the effect sizes, infrequently used scales were administered. The categorization of these variables aimed to obtain relatively balanced group distributions that would increase the power of moderator analyses. Otherwise, the distribution in their original version would be highly scattered.

Regarding Hofstede's 6 cultural dimensions, the average scores out of 100 for 166 primary studies based on the country of origin of the participants are as follows: 57.79 ($SD= 17.33$, ranged between 13-100) for power distance, 47.04 ($SD= 19.56$, ranged between 0-87) for individualism, 52.66 ($SD= 11.04$, ranged between 5-70) for motivation towards achievement and success, 59.53 ($SD= 20.36$, ranged between 8-100) for uncertainty tolerance, 48.07 ($SD= 15.29$, ranged between 8-86) for long term orientation, and 45.62 ($SD= 20.51$, ranged between 0-84) for indulgence. The relatively high standard deviation scores and large range intervals can be interpreted as a high variability among countries in terms of the cultural values they are identified with.

4.2. Main and Moderator Analyses for Key Individual Psychological Resources and Psychological Well-Being

4.2.1. Overall Effect Size between Key Individual Psychological Resources and Psychological Well-Being

The first main research question in this meta-analysis is: "How strong is the relationship between all and each key individual psychological resources (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence) and psychological well-being?" To answer subquestion 1a, a three-level random-effects meta-analysis was used to analyze the data (see Table 4.1.).

Table 4.1. Results of the Random Effect Three-Level Meta-Analysis

Model	Outcome Variable	k	N	ES_r	95% CI		z	p	Cochran's Q	p_q	I^2 (%)
					Lower	Upper					
Random	Psychological Well-Being	170	94.825	0.577	0.622	0.692	1.304	<.001	5461.608	<.001	95.75

Note. k = number of studies, Cochran's Q = tests of heterogeneity, N = number of participants in all studies, CI = confidence interval, I^2 = total amount of variance not attributable to sampling error

The estimated summary effect of key individual psychological resources and psychological well-being across all studies ($k = 170$) and effect sizes ($u = 251$) effect sizes was $r = 0.589$, $p < .0001$, 95% CI [0.622, 0.692] with a standard error of 0.017. This overall effect is statistically significant ($t(248) = 36.952$, $p < .0001$). According to Cohen (1988) for effect sizes, where $r = .10$, $r = .30$, and $r = .50$ represent small, medium, and large effects respectively, the overall effect size of 0.589 can be regarded as large.

In addition, the log-likelihood-ratio test was employed to determine the significance of effect size variance (level 1), within-study variance (level 2), and between-study variance (level 3). The results showed that there are significant differences at all levels ($p < .0001$). Among the total sources of variance, the between-effect size variance (level 1) was 4.24%, the within-study variance (level 2) was 23.091%, and the between-study variance (level 3) was 72.659%. Given the results, we can conclude that there is more variance between the studies than within the studies since the fit of the full model (level 3) is significantly better than the fit of the reduced model (level 2). The I-squared (I^2) statistic is 95.75%, which means that some 95.75% of the variance in observed effects reflects variance in true effects rather than sampling error. In other words, as shown in Figure 4.1., this data set showed heterogeneity than may be expected based on sampling variance alone, and most of the random variation was between the authors, not within the studies. Due to these significant variances both on within and between study levels, testing variables as potential moderators of the overall effect were justified.

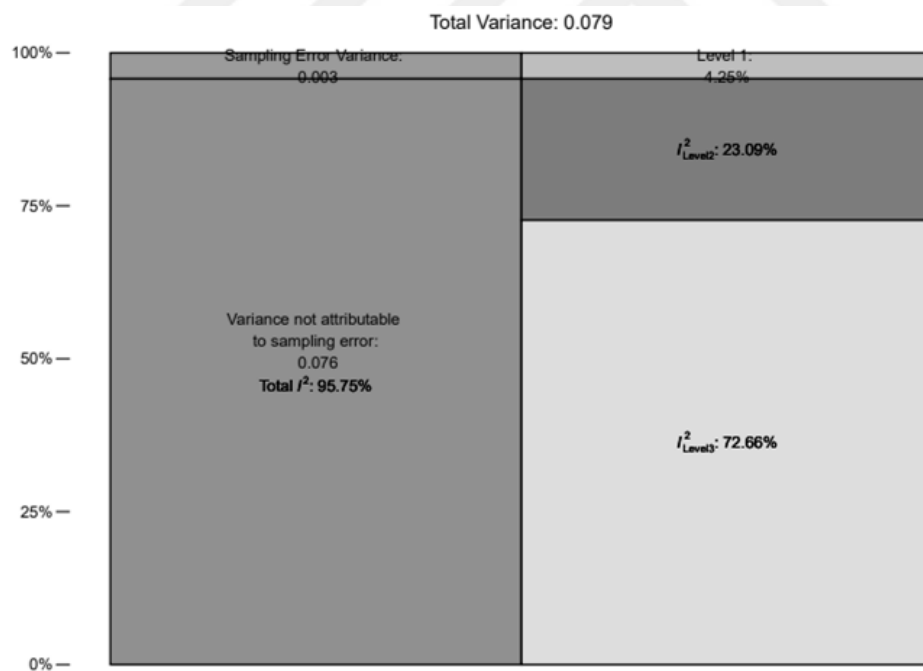


Figure 4.1. Heterogeneity Plot Produced with R Program

4.2.2. Analyses of Publication Bias

Several methods were employed to examine the potential bias in the current meta-analysis. According to Borenstein et al. (2009), a crucial component and the first step

of any meta-analysis for detecting bias is the visual examination of the forest plot, which serves as the data's visual representation. Each square in Appendix D represents the estimated effect size for a particular study and the lines emanating from the squares represent the estimate's 95% confidence interval. Each square's area reflects the weight that each study brought to the meta-analysis. Because greater weight is given to each study in the meta-analysis depending on sample size and precision, larger squares also signify studies with larger samples. The forest plot gives information about studies at first glance and how much variation among the studies exists. Interpretation of the forest plot can be done by visual inspection of the overlaps among point estimates (black squares) and their 95% confidence intervals (Dettori et al., 2021). The forest plot for research question 1 seems to be highly free from overlaps in terms of both point estimates and confidence intervals. It can be gauged from Appendix D that there is considerable variability among the effect sizes.

Figure 4.2. indicates that the funnel plot was constructed upon a random effect model by taking into consideration each study as a unit of analysis. Standard error was used in the y-axis as the precision index of the studies. The funnel plot seems to be relatively symmetrical because of several reasons. As per the criteria listed by Vevea et al. (2019) for interpreting the funnel plot, firstly, the effect sizes seem to be scattered evenly around the true effect size (a point shown as a blue diamond on the horizontal axis). The line dividing the funnel into two represents the mean effect size. As shown in Figure 4.2., roughly the number of the studies from top to bottom seem balanced at the right- and left-hand side of the line. Secondly, smaller studies show more variability than larger ones as moving from the top to the bottom, eliminating the greater risk of sampling error with larger sample sizes, honest-to-goodness. However, the funnel did not narrow enough as the precision (lower standard error in this case) of the studies increased. Moreover, it seems that smaller studies were suppressed, especially on the right-hand side bottom of the funnel. Meanwhile, this way suppression is better than on the left-hand side bottom of the funnel. Fourth, several effect sizes were distributed not between the 95% confidence intervals (the equilateral of the funnel), which is ideally expected in the case of symmetry of the funnel plot. Taken all these together, the visual inspection of the funnel plot gives more hint for the presence rather than absence of publication bias among studies.

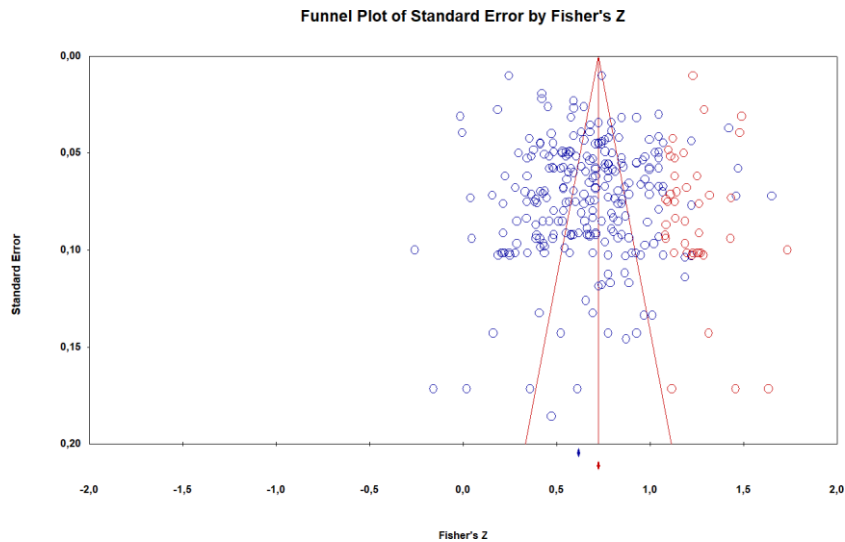


Figure 4.2. Funnel Plot of All Studies Included in the Main Meta-Analysis

Note. Blue circles indicate observed studies, while red dots indicate imputed studies.

The Trim and Fill Method (TFM) were employed as the second method to deal with publication bias. TFM imputed 42 additional studies to the right of the mean as illustrated in Figure 4.2. and suggested no imputed study to the left. All the suggested studies were to the right of the mean (larger studies and smaller studies with larger effect sizes) and both at the top and to the bottom which might decrease the risk of publication bias. If the suggested studies would include more of smaller studies to the left-hand side, than it could be in favor of publication bias. With additional studies, TFM calculates an adjusted mean effect size of 0.627, a larger value than the computed one from the sample (*effect size*=0.589), leading to the conclusion that the mean effect size is underestimated in the sample, not overestimated as a result of sample effect by publication bias.

However, Egger's Regression Test as shown in Table 4.2. does not support this result, since the null hypothesis that “*there is no funnel plot asymmetry ($\beta_0 = 0$)*” was rejected ($p < .05$).

Table 4.2. Egger's Regression Test Results for All Studies

Intercept	2.01552
Standard error	0.62724
95% lower limit (2-tailed)	0.78015
95% upper limit (2-tailed)	3.25088
t value	3.21333
df	249.00000
P value (2-tailed)	0.00149

In addition, as another indicator of publication bias, Table 4.3. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal a FSN of 82821 meaning that 82,821 additional studies with non-significant results are necessary to invalidate the effect. Accordingly, the results of the meta-analysis can be accepted as relatively robust to publication bias since the computed FSN value is much larger than the cut-off point proposed by Mullen et al. (2001) that $N / (5k+10)$ should exceed 1, meaning that N is expected to be larger than $5k+10$, where k represents the total number of studies included in the study. The formula was computed as 65.47 for this meta-analysis.

Table 4.3. *Rosenthal's FSN of All Studies*

Z-value for observed studies	169.7634
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	251
Fail safe N	82821

Another method to explore the presence or absence of publication bias is Orwin's FSN, which is based on practical significance rather than p-value. Table 4.4. illustrates the results of the calculations for this meta-analysis, which means that an additional 1293 studies with effect sizes of 0.10 are necessary to bring the mean effect of this meta-analysis under 0.10. It can be concluded that this result is trivial and increases the possibility of the absence of publication bias in the study.

Table 4.4. *Orwin's FSN of All Studies*

Correlation in observed studies	0.54900
Criterion for a 'trivial' correlation	0.10000
Mean correlation in missing studies	0.000
Fail safe N	1293

As shown in Table 4.5., Begg's and Mazumdar's rank correlation based on Kendall's S statistics ($Q = -2376$) was also checked for further exploration of publication bias. Kendall's tau with continuity correction was -0.07572. Significant symmetry was found ($z = 1.786$, $p = .074$) and the result is strongly suggestive of the absence of publication bias.

In conclusion, six different methods were used to explore potential bias in the study. The visual inspection of the funnel plot and the results of Egger's regression test suggested the presence of publication bias whereas Duval's TMF, Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the possibility of publication bias.

Table 4.5. *Begg's and Mazumdar's Rank Correlation for All Studies*

Kendall's S statistic (P-Q)	-2376.000
Tau	-0.07572
Z-value for tau	1.78644
P-value (two-tailed)	0.07403

4.2.3. Moderator Analyses

Besides the common effect size findings, the potential influence of several moderators was aimed to be examined to answer subquestion 2a. Omnibus tests were performed to determine whether (potential) moderating effects of the publication year of the study, sample size of the study, age group of the participants, country of origin of the participants, adapted or original version of the PWB Scales used, frequency of the usage of scales used to assess key individual psychological variables, and Hofstede's six cultural dimensions. The results of the moderator analyses of the relationship between key individual psychological resources and psychological well-being can be found in Table 4.6.

4.2.3.1. Publication Year

To begin with publication year, the studies included in this meta-analysis were published between 1998-2023. Publication year was one of the continuous moderators in the analyses. The results of the omnibus test showed that the overall effect was not significantly moderated by the publication year of the study $F(22, 228) = 0.589, p = .928$. This implies that none of the regression coefficients of the variables was added to the model. The mean effect for studies published between 1990-2023 equals was $r = 0.279$ and this effect did not significantly deviate from zero: $t(228) = 0.964, p = 0.335$.

4.2.3.2. Sample Size

Another continuous moderator was the sample size, and the results showed no significant moderating effect in the relationship between key individual psychological resources and psychological well-being, $F(1, 249) = 0.735, p = .391$. The mean effect of the sample size of the studies equals 0.599 and this effect did not significantly deviate from zero: $t(249) = 24.706, p = 0.391$.

4.2.3.3. Age Group

The studies included samples from diverse age groups like university students, emerging adults, adults, senior adults, and elders. The groups were divided into two categories as “university students” ($u = 95$) and “others” ($u = 156$). The moderating effect was not significant $F(1, 247) = 1.574, p = .210$.

4.2.3.4. Country of Origin of the Participants

The country of origin of the participants was divided into “Western” ($u = 123$) and “Eastern” ($u = 128$) countries. The summary effect size did not significantly differ as a function of being a Western or an Eastern country $F(1, 249) = 1.253, p = .263$.

4.2.3.5. Adapted or Original Version of the PWB Scales Used

No significant moderating effect of using the original ($u = 90$) or adapted version ($u = 151$) of the PWB Scales was found for summary effect $F(1, 249) = 0.985, p = .374$.

4.2.3.6. Frequency of the Usage of the Scales

The seven key individual psychological resources were measured with various measurement tools. The tools were classified into two groups “frequently used” ($u = 200$) and “infrequently used” ($u = 51$). The summary effect size was not significantly moderated by the frequency of the usage of the scales $F(1, 249) = 0.008, p = .925$.

4.2.3.7. Cultural Dimensions

Neither of the six cultural dimensions, namely power distance $F(1, 245) = 3.313, p = .069$; individualism $F(1, 245) = 0.264, p = .607$; motivation towards achievement and success $F(1, 245) = 0.073, p = .786$; uncertainty avoidance $F(1, 245) = 0.114, p =$

.735; long term orientation $F(1, 245) = 1.335, p = .249$; and indulgence $F(1, 245) = 0.024, p = .875$ significantly moderated the relationship between key individual psychological resources and psychological well-being. The results of both continuous and categorical moderator analyses for the first research question are shown in Table 4.6.

Table 4.6. Moderator Analyses for All Studies

Moderator Variables	Categories	u^*	k^*	r	SE	%95 CI		F (df1, df2)	p
						Lower	Upper		
Publication Year	Continuous	251	170	0.280	0.298	-0.300	0.875	0.589 (22, 226)	0.928
Sample Size	Continuous	251	170	0.599	0.028	0.636	0.747	0.735 (1, 247)	0.391
Country of Origin*	Eastern	123	83	0.572	0.029	0.592	0.709	1.253 (1, 247)	0.263
	Western	128	87						
Age Group	University Stdnts*	95	67	0.601	0.026	0.643	0.747	1.398 (1, 247)	0.238
	Others	156	103						
PWB Scales Adapted or Original	Adapted	87	58	0.608	0.036	0.635	0.777	0.985 (1, 247)	0.374
	Original	164	112						
Frequency of Usage of the Scale	Infrequently	71	54	0.586	0.032	0.608	0.736	0.008 (1, 247)	0.925
	Frequently	180	116						
Cultural Values Dimensions	Power distance	247	166	0.660	0.071	0.651	0.934	3.313 (1, 245)	0.069
	Individualism	247	166	0.566	0.054	0.533	0.750	0.264 (1, 245)	0.607
	MTAAS*	247	166	0.600	0.092	0.510	0.875	0.073 (1, 245)	0.786
	UT*	247	166	0.570	0.064	0.521	0.773	0.114 (1, 245)	0.735
	LTO*	247	166	0.632	0.069	0.608	0.881	1.335 (1, 245)	0.249
	Indulgence	247	166	0.579	0.051	0.559	0.761	0.024 (1, 245)	0.875

* Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance; u = number of effect sizes, k = number of primary studies

4.3. Main and Moderator Analyses for Resilience and Psychological Well-Being

4.3.1. Overall Effect Size between Resilience and Psychological Well-Being

The subquestion 1b in this meta-analysis is “How strong is the relationship between resilience and psychological well-being?” A random-effect meta-analysis was employed by using CMA to answer this question. Effect size(s) provided by the studies were included in the meta-analysis as a unit of analysis. Fifty-eight studies yielded 60 effect sizes based on resilience. The mean effect size is 0.587 with a 95% confidence

interval of 0.539 to 0.632 based on a random model. According to Cohen's criteria, 0.587 is interpreted as large in terms of the magnitude of the effect size. The mean effect size in the universe of comparable studies could fall anywhere in this interval. The Z-value tests the null hypothesis that the mean effect size is zero, which is 18.684 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected. The details of the results are presented in Table 4.7.

Table 4.7. Effect Size and Statistical Test for Resilience

Model	u	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	60	0.587	0.539	0.632	18.684	0.000

Note. u = number of effect sizes; PE = point estimate; CI = confidence of interval

4.3.2. Analyses of Publication Bias

To begin with, the forest plot, 60 effect sizes in total pertaining to the relationship between resilience and psychological well-being are shown in Figure 4.3.

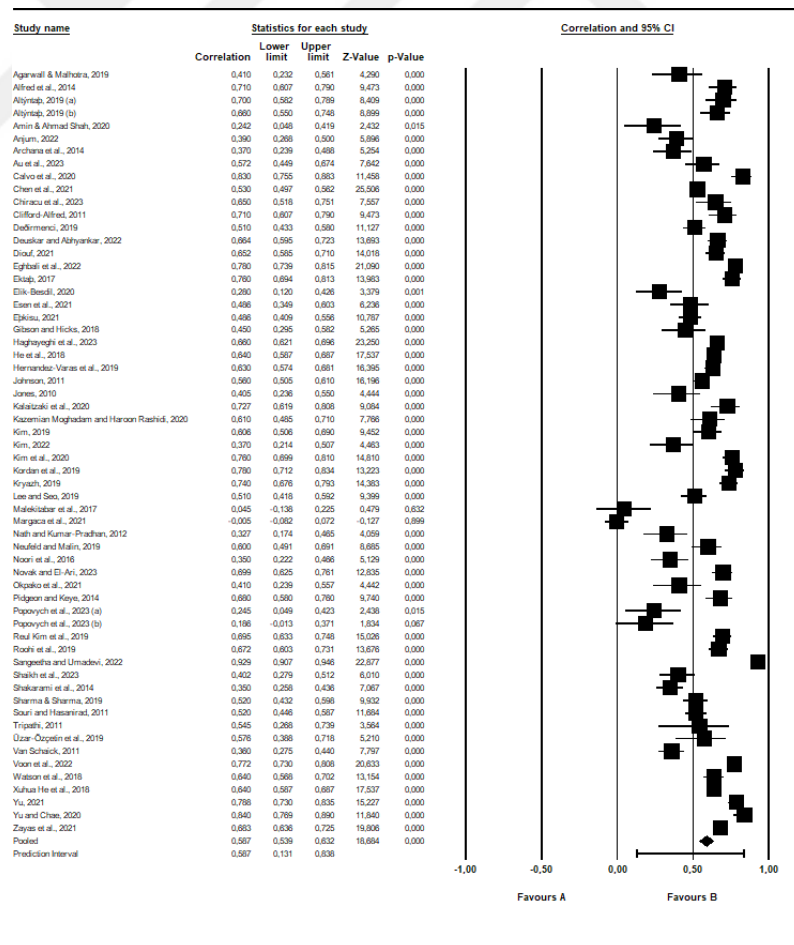


Figure 4.3. Forest Plot for Studies on Resilience and PWB

Interpretation of the forest plot can be done by visual inspection of the overlaps among point estimates (black squares) and their 95% confidence intervals (Dettori et al., 2021). Among 60 effect sizes, overlaps seem so rare (less than 5% of the total effect size), all the confidence intervals are different from each other. These two indicators can be evaluated as positive in terms of the absence of homogeneity between the studies.

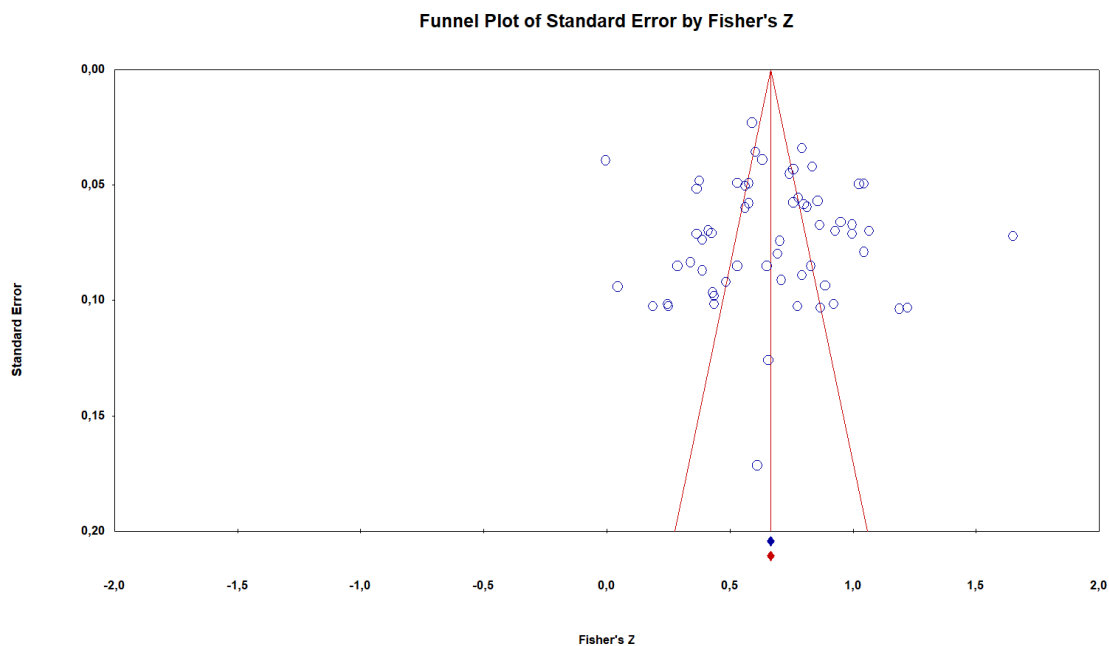


Figure 4.4. Funnel Plot of Studies on Resilience and PWB

Note. Blue circles indicate observed studies.

The shape of the funnel plot seems to display relative evidence of symmetry (See Figure 4.4.). The adjusted mean effect size is the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size); hence there is no imputed study suggesting the right-hand side of the plot at the bottom. The Trim and Fill method suggested no study to either the left or right of the mean effect size. From this information, it can be deduced that there are no missing studies in smaller ones, especially on the left-hand side of the bottom. Smaller studies seem to show more variability at the bottom than larger ones at the top, decreasing the risk of sampling error with larger sample sizes. Besides, nearly 50% of the effect sizes were scattered out of the 95% confidence intervals (the equilateral of the funnel).

However, the distribution of the effect sizes gets wider as the standard error increases at the top of the shape, but a decrease should be the case. Moreover, there are many studies out of the 95% confidence interval on both sides. In short, there are hints for both the absence and presence of publication bias concerning the effect sizes on the relationship between resilience and psychological well-being. Although it does not seem possible to reach a definitive conclusion on the absence of publication bias, the visual examination of the funnel plot gives more clues for the absence rather than for the presence of publication bias.

The Egger's Regression Test, as shown in Table 4.8., gave a result on behalf of the absence of publication bias, the null hypothesis that "*there is no funnel plot asymmetry ($\beta_0 = 0$)*" was rejected ($p > .05$). In other words, the intercept was not statistically significant.

Table 4.8. *Egger's Regression Test Results for Resilience*

Intercept	0.73848
Standard error	1.55274
95% lower limit (2-tailed)	-2.36967
95% upper limit (2-tailed)	3.84664
t value	0.47560
df	58.00000
P value (2-tailed)	0.63615

As another indicator of publication bias, Table 4.9. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal a FSN of 98984.00000 meaning that 98,984 additional studies with non-significant results are necessary to invalidate the effect. Mullen et al.'s formula (2001) gave the result of 319.303, which is bigger than one, and validated the non-presence of publication bias.

Table 4.9. *Rosenthal's FSN of All Studies for Resilience*

Z-value for observed studies	79.63157
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	60
Fail safe N	98984.00000

Another indicator to explore the presence of publication bias is Orwin's FSN, and Table 4.10. illustrates the results of the calculations for this meta-analysis. According to the results, 3939 further studies are necessary to calculate the mean effect of this meta-analysis under 0.01. Therefore, the method eliminated the high possibility of publication bias.

Table 4.10. *Orwin's FSN of All Studies for Resilience*

Correlation in observed studies	0.58260
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	3939

Lastly, Begg's and Mazumdar's rank correlation ($Q = -102$) was also checked for further exploration of publication bias. Kendall's tau with continuity correction was -0.05713 (see Table 4.11.). The result was not statistically significant ($z = 0.644$, $p = 0.519$) and suggesting the absence of publication bias.

Table 4.11. *Begg's and Mazumdar's Rank Correlation for Resilience*

Kendall's S statistic (P-Q)	-102.000
Tau	-0.05713
Z-value for tau	0.64417
P-value (two-tailed)	0.51946

In conclusion, among the methods used to explore potential publication bias, the visual inspection of the funnel plot suggested a relative presence of publication bias whereas Duval's TMF, Egger's regression test, Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the possibility of publication bias.

4.3.3. Heterogeneity Analysis

Another source of heterogeneity examination (in addition to the forest plot) is the evaluation of the variance among effect sizes via Q value and I -squared statistics. The Q -value is found as 1193.611 with 59 degrees of freedom and $p < .001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I -squared statistic is 95.05%, which means that some 95.05% of the variance in observed effects reflects variance in true effects rather than sampling error. Tau-squared, the variance of true effect sizes is 0.072 in Fisher's Z

units. Tau, the standard deviation of true effect sizes, is 0.268 in Fisher's Z units. Corresponding tau value causes a 95% prediction interval of 0.131 to 0.838, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009). In sum, the data provide enough evidence for the existence of heterogeneity among the studies. Details about heterogeneity are shown in Table 4.12.

Table 4.12. *Heterogeneity Tests for Resilience*

<i>Test of Heterogeneity</i>				Tau-squared	
Q-value	df (Q)	p	I ²	Tau-squared	Tau
1210.670	62	0.000	94.961	0.069	0.262

4.3.4. Moderator Analyses

For research subquestion 2b, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). For this purpose, the analog to the ANOVA method was used. Results of the analog to the ANOVA are presented in Table 4.13. The Q-Between (Q_B) line tells whether the difference between groups is statistically significant or not in terms of the average effect size (Borenstein et al., 2009).

The statistically non-significant p -values for each moderator indicated no difference in the relationship between resilience and psychological well-being. As shown in Table 4.13, cultural background ($Q = 3.842$, $df = 1$, $p = 0.595$), age group of the participants ($Q = 3.842$, $df = 1$, $p = 0.121$), PWB Scales version ($Q = 10.380$, $df = 1$, $p = 0.060$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 0.028$, $df = 1$, $p = 0.866$) did not influence the relationship between resilience and psychological well-being.

Table 4.13. *Categorical Moderator Analyses for Resilience*

Moderator Variables	Categories	u	k	Mean ES	95% CI		df	χ^2	Q_B	p
Cultural Background	Eastern	37	36	0.587	0.538	0.632	1	3.842	0.283	0.595
	Western	23	22							
Age Group	University Stdnts*	24	24	0.584	0.511	0.648	1	3.842	2.398	0.121

	Others	36	34							
PWB Scales	Adapted	25	25	0.553	0.391	0.682	1	5.991	10.380	0.060
Adapted or Original	Original	35	33							
Frequency of Usage of the Scale	Infrequently	23	22	0.587	0.539	0.632	1	3.842	0.028	0.866
	Frequently	37	36							

Note. * Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

To investigate the effect of continuous moderators (year of publication, sample size, and Hofstede's six cultural dimensions), nine separate meta-regression models with random effects utilizing unrestricted maximum likelihood estimation were conducted.

Table 4.14. *Continuous Moderator Analyses for Resilience*

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	60	58	0.0133	0.0101	-0.0064	0.0330	1.32	0.186
Sample Size	60	58	-0.0000	0.0001	-0.0003	0.0002	-0.20	0.839
Power Distance	58	58	-0.0036	0.0022	-0.0079	0.0007	-1.65	0.099
Individualism	58	56	0.0021	0.0020	-0.0019	0.0060	1.02	0.306
Motivation towards Achievement and Success	58	56	0.0065	0.0039	-0.0011	0.0140	1.68	0.093
Uncertainty Tolerance	58	56	-0.0005	0.0019	-0.0042	0.0032	-0.28	0.781
Long Term Orientation	58	56	-0.0005	0.0022	-0.0049	0.0038	-0.25	0.802
Indulgence	58	56	0.0023	0.0020	-0.0016	0.0061	1.15	0.249

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

As shown in Table 4.14, no significant effect was found for publication year ($z = 1.32, p > .05$), sample size ($z = -0.20, p > .05$), power distance ($z = -1.65, p > .05$), individualism ($z = 1.02, p > .05$), motivation towards achievement and success ($z = 1.68, p > .05$), uncertainty tolerance ($z = -0.28, p > .05$), long term orientation ($z = -0.25, p > .05$), and indulgence ($z = 1.15, p > .05$).

4.4. Main and Moderator Analyses for Hope and Psychological Well-Being

4.4.1. Overall Effect Size between Hope and Psychological Well-Being

The subquestion 1c in this meta-analysis is “How strong is the relationship between hope and psychological well-being?” Twenty-eight studies yielded 29 effect sizes based on hope. The details of the results are presented in Table 4.15.

Table 4.15. *Effect Size and Statistical Test for Hope*

Model	<i>u</i>	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	29	0.559	0.486	0.624	12.382	0.000

Note. *u* = number of effect sizes; PE = point estimate; CI = confidence of interval

The mean effect size is 0.559 with a 95% confidence interval of 0.486 to 0.624 based on a random model. According to Cohen’s criteria, 0.559 is interpreted as large in terms of the magnitude of the effect size. The Z-value is 12,382 with $p < 0,001$, then the null hypothesis was rejected. It can be concluded that in the universe of populations comparable to those in the analysis, the mean effect size is significantly different from zero.

4.4.2. Analyses of Publication Bias

In Figure 4.5. below, a forest plot of all 29 effect sizes is exhibited. There is no overlap among squares and confidence intervals. Therefore, the visual examination of the forest plot suggested the absence of publication bias and significant variability (or heterogeneity) among the effect sizes.

The shape of the funnel plot seems to display some evidence of symmetry since it gets wider as the standard error increases at the bottom of the shape, but not as much as it is expected in an ideal symmetry. As can be seen in Figure 4.6. below, the adjusted value is not the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size); hence, there are imputed studies on the plot when we are examining for missing studies to the right of the mean effect size based on a random-effects model. The suggestion of additional studies is smaller studies with large effect sizes, which increases the probability of low publication bias.

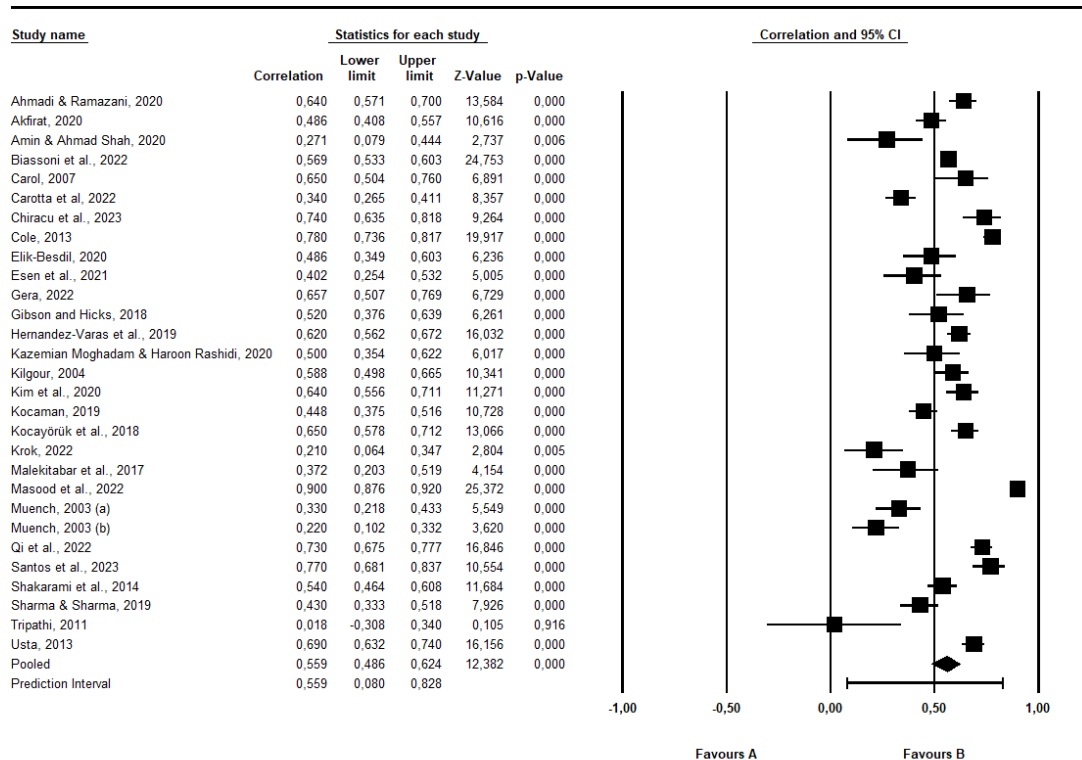


Figure 4.5. Forest Plot for Studies on Hope and PWB

TFM imputed 5 additional studies to the right of the mean as illustrated in Figure 4.6.

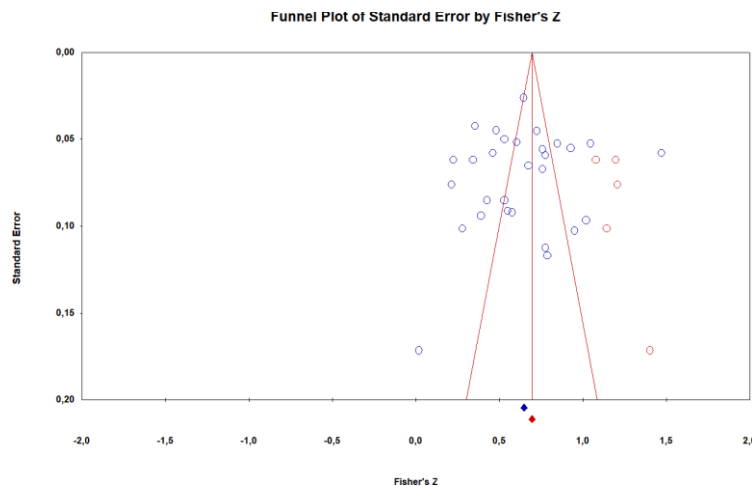


Figure 4.6. Funnel Plot of the Studies on Hope and PWB

Note. Blue circles indicate observed studies.

With 5 additional studies required, TFM calculates an adjusted mean effect size of 0.600, larger value than the computed one from the sample (*effect size*=0.559), leading to the conclusion that the mean effect size is underestimated. Underestimation

implies lower risk for publication bias than overestimation. Meanwhile, the expected outcome is the equality of mean effect size between computed and adjusted ones. The trimmed studies were mostly to the top of the plot, which means that missing smaller studies at the bottom seem to be lower (small study effect). However, the dispersion of the effect sizes out of the confidence interval at the top of the funnel constitutes a risk for publication bias. In some, there are more indicators for the lower risk of publication bias according to the visual inspection of the funnel plot.

This result is supported by Egger's Regression Test as shown in Table 4.16. since the null hypothesis that "*there is no funnel plot asymmetry ($\beta_0 = 0$)*" was rejected ($p > .05$).

Table 4.16. *Egger's Regression Test Results for Hope*

Intercept	-0.65996
Standard error	2.30095
95% lower limit (2-tailed)	-5.38111
95% upper limit (2-tailed)	4.06119
t value	0.28682
Df	27.00000
P value (2-tailed)	0.77644

Rosenthal's FSN value was computed as 22254.00000 meaning that 22254 additional studies with non-significant results are necessary to invalidate the effect. Accordingly, this method suggested no publication bias since the computed FSN value is much larger than the cut-off point, which is 143.574 based on Mullen et al.'s formula (2001). The details about the FSN were shown in Table 4.17.

Table 4.17. *Rosenthal's FSN of All Studies for Hope*

Z-value for observed studies	54.32952
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	29
Fail safe N	22254.00000

Additionally, as shown in Table 4.18. Orwin's FSN computed an additional 1849 studies to decrease the mean effect of hope and psychological well-being under

0.01. In other words, this method also eliminated the possibility of presence of publication bias.

Table 4.18. *Orwin's FSN of All Studies for Hope*

Correlation in observed studies	0.56991
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	1849.000

As shown in Table 4.19., Begg's and Mazumdar's rank correlation ($Q = -10.000$) was also checked for further exploration of publication bias. Kendall's tau with continuity correction was -0.02217 . Significant symmetry was found ($z = 0.168$, $p = 0.865$) and the result is strongly suggestive of absence of publication bias.

Table 4.19. *Begg's and Mazumdar's Rank Correlation for Hope*

Kendall's S statistic (P-Q)	-10.000
Tau	-0.02217
Z-value for tau	0.16882
P-value (two-tailed)	0.86594

4.4.3. Heterogeneity Analysis

The Q-value is found as 567.457 with 28 degrees of freedom and $p < 0.001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. Details about heterogeneity are shown in Table 4.20.

Table 4.20. *Heterogeneity Tests for Hope*

Test of Heterogeneity				Tau-squared	
Q-value	df (Q)	p	I ²	Tau-squared	Tau
567.457	28	0.000	95.066	0.069	0.263

The I-squared statistic is 95.06%, which means that some 95.06% of the variance in observed effects reflects variance in true effects rather than sampling error. Tau-squared was 0.069, and tau was 0.263, all in Fisher's Z units. Corresponding tau value causes a 95% prediction interval of 0.080 to 0.828, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009).

4.4.4. Moderator Analyses

For research subquestion 2c, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). The analog to the ANOVA results showed that country of origin of the participants ($Q = 0.005$, $df = 1$, $p = 0.944$), age group of the participants ($Q = 2.526$, $df = 1$, $p = 0.112$), PWB Scales version ($Q = 0.985$, $df = 1$, $p = 0.611$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 0.281$, $df = 1$, $p = 0.596$) did not influence the relationship between hope and psychological well-being. The results are given in Table 4.21.

Table 4.21. *Categorical Moderator Analyses for Hope*

Moderator Variables	Categories	<i>u</i>	<i>k</i>	Mean ES	95% CI		<i>df</i>	χ^2	Q_B	<i>p</i>
					Lower	Upper				
Cultural Background	Eastern	37	36	0.559	0.484	0.625	1	3.842	0.005	0.944
	Western	23	22							
Age Group	University Stdnts*	10	10	0.569	0.448	0.669	1	3.842	2.526	0.112
	Others	19	18							
PWB Scales Adapted or Original	Adapted	12	12	0.559	0.484	0.625	1	5.991	0.985	0.611
	Original	17	16							
Frequency of Usage of the Scale	Infrequently	11	10	0.559	0.484	0.625	1	3.842	0.281	0.596
	Frequently	18	18							

Note. *u* = number of effect sizes; *k* = number of studies; ES = effect size; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

As shown in Table 4.22., no significant effect was found for publication year ($z = 1.49$, $p > .05$), sample size ($z = 0.36$, $p > .05$), power distance ($z = 0.61$, $p > .05$), individualism ($z = -0.96$, $p > .05$), motivation towards achievement and success ($z = -1.20$, $p > .05$), uncertainty tolerance ($z = 1.77$, $p > .05$), and long-term orientation ($z = -1.49$, $p > .05$). However, the relationship between hope and psychological well-being was significantly and negatively moderated by indulgence scores ($z = -2.41$, $p < .05$). In other words, there was significant heterogeneity among effect sizes in relation to indulgence level of the country of origin of the participants. The mean effect size in studies that is highly identified with the cultural value of indulgence in terms of the

country of origin of the participants (e.g., USA, UK) was 0.006 lower than the ones identified with lower indulgence (e.g., Iran, India). The relationship between hope and psychological well-being was stronger in studies, which were conducted in countries with lower indulgence scores as a cultural value.

Table 4.22. *Continuous Moderator Analyses for Hope*

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	29	28	0.0128	0.0086	-0.0040	0.0295	1.49	0.135
Sample Size	29	28	0.0001	0.0002	-0.0003	0.0005	0.36	0.721
Power Distance	29	28	0.0021	0.0034	-0.0046	0.0088	0.61	0.541
Individualism	29	28	-0.0026	0.0028	-0.0080	0.0028	-0.96	0.339
Motivation towards Achievement and Success	29	28	-0.0064	0.0053	-0.0169	0.0040	-1.20	0.229
Uncertainty Tolerance	29	28	0.0045	0.0026	-0.0005	0.0095	1.77	0.076
Long Term Orientation	29	28	-0.0064	0.0043	-0.0148	0.0020	-1.49	0.136
Indulgence	29	28	-0.0060	0.0025	-0.0109	-0.0011	-2.41	0.015*

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

4.5. Main and Moderator Analyses for Optimism and Psychological Well-Being

4.5.1. Overall Effect Size between Optimism and Psychological Well-Being

The subquestion 1d in this meta-analysis is “How strong is the relationship between optimism and psychological well-being?” Thirty-five studies yielded 36 effect sizes based on optimism. The mean effect size is 0.530 with a 95% confidence interval of 0.474 to 0.582 based on a random model. According to Cohen’s criteria, 0.532 is interpreted as large in terms of the magnitude of the effect size. The mean effect size in the universe of comparable studies could fall anywhere in this interval. The Z-value is 15.359 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected, the mean effect size is not precisely zero. The details of the results are presented in Table 4.23.

Table 4.23. *Effect Size and Statistical Test for Optimism*

Model	<i>u</i>	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	36	0.530	0.474	0.582	15.359	0.000

Note. *u* = number of effect sizes; PE = point estimate; CI = confidence of interval

4.5.2. Analyses of Publication Bias

Thirty-six effect sizes regarding the relationship between optimism and psychological well-being are shown in the forest plot in Figure 4.7. There is no overlap among the

effect sizes and confidence intervals. The plot suggests the absence of publication bias among the studies.

Nevertheless, the shape of the funnel plot seems to display some clear evidence of publication bias. The high concentration of the studies at the right-hand side of the mean might imply that studies with lower effect sizes were missing either because they were not published or not reached. Moreover, the large studies at the top seems to have lower effect sizes than the small studies to the bottom. This might be due to the possibility that studies with small sample and large effect sizes tended to be published and/or reached for optimism. Moreover, nearly 50% of the studies are scattered out of the 95% confidence intervals (the equilateral of the funnel).

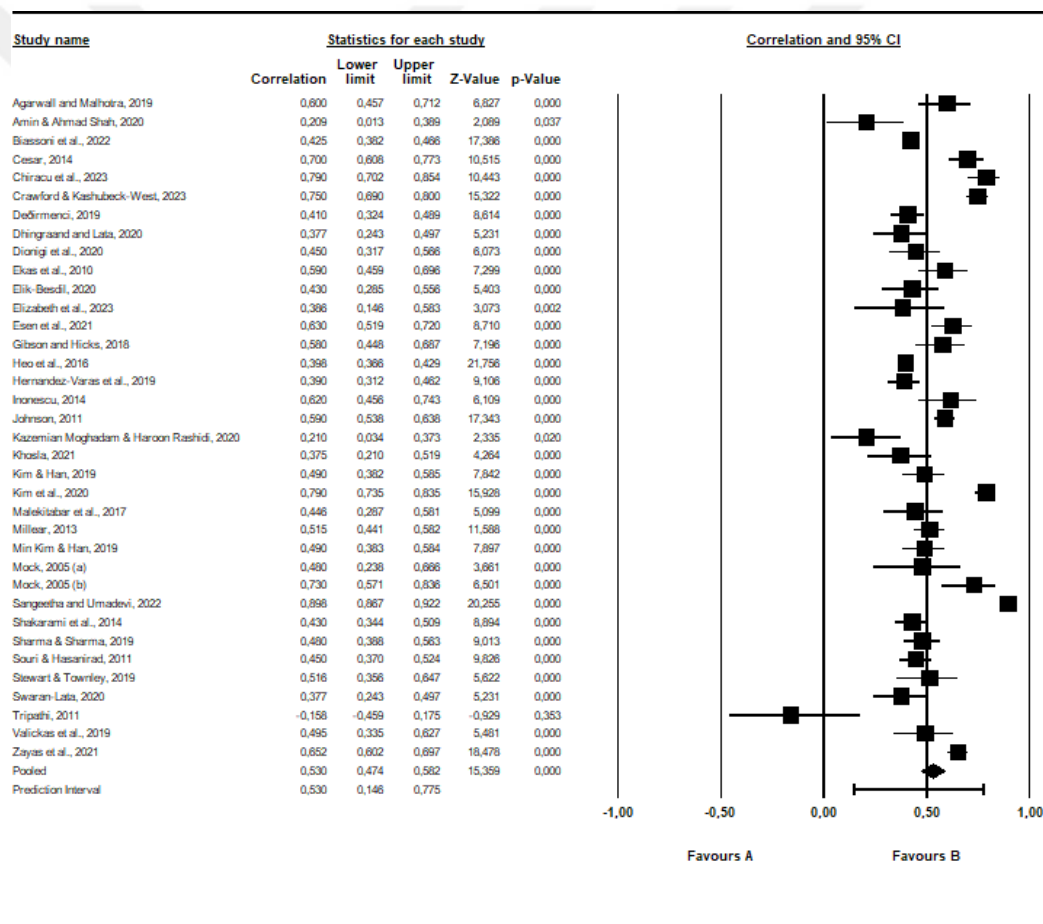


Figure 4.7. Forest Plot for Studies on Optimism and PWB

As can be seen in Figure 4.8. below, the adjusted value is not the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size); hence there

are imputed studies on the plot when we are examining for missing studies to the left of the mean effect size based on a random-effects model. TFM imputed 7 additional studies to the left of the mean and suggested no imputed study to the right. With additional studies, TFM calculates an adjusted mean effect size of 0.517, a lower value than the computed one from the sample (*effect size*=0.530), leading to the conclusion that the mean effect size is overestimated in the sample. In sum, visual inspection of the funnel plot and TFM methods suggested a high risk for publication bias.

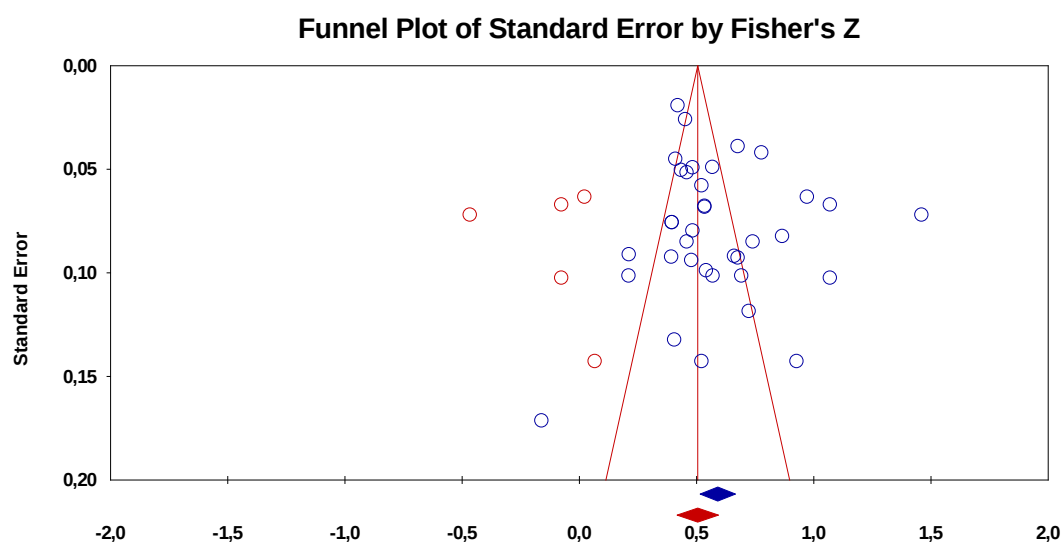


Figure 4.8. Funnel Plot of Studies on Optimism and PWB

Note. Blue circles indicate observed studies.

However, this result is not supported by Egger's Regression Test as shown in Table 4.24. since the null hypothesis that "*there is no funnel plot asymmetry ($\beta_0 = 0$)*" was rejected ($p > .05$).

Table 4.24. Egger's Regression Test Results for Optimism

Intercept	2.03898
Standard error	1.21941
95% lower limit (2-tailed)	-0.43917
95% upper limit (2-tailed)	4.57060
t value	1.67210
df	34.00000
P value (2-tailed)	0.10368

Moreover, as another indicator of publication bias, Table 4.25. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal an FSN of 25874.00000 meaning that 25,874 additional studies with non-significant results are

necessary to invalidate the effect. Accordingly, the results of the meta-analysis can be accepted as robust to publication bias since the computed FSN value is much larger than the cut-off point 136.178 for this meta-analysis, so the results of this meta-analysis seem to be highly robust to the publication bias according to the FSN method.

Table 4.25. *Rosenthal's FSN of All Studies for Optimism*

Z-value for observed studies	52.58041
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	36
Fail safe N	25874.000

Orwin's FSN calculated extra 1922 studies so that the mean effect of this meta-analysis falls under 0.01. This means that, according to this method, the probability of a high publication bias is very low. The results were shown in Table 4.26.

Table 4.26. *Orwin's FSN of All Studies for Optimism*

Correlation in observed studies	0.49591
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	1922.000

Begg's and Mazumdar's rank correlation generated Kendall's tau ($Q=58$) with continuity correction as 0.09062. As seen in Table 4.27. Significant symmetry was found ($z=0.776$, $p>.05$) and the result is strongly suggestive of absence of publication bias.

In summary, six different methods were used to explore potential publication bias for the relationship between optimism and psychological well-being. The visual inspection of the funnel plot and TMF methods suggested the presence of publication bias whereas Egger's regression test, Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the possibility of publication bias.

Table 4.27. *Begg's and Mazumdar's Rank Correlation for Optimism*

Kendall's S statistic (P-Q)	58.0000
Tau	0.09062
Z-value for tau	0.77639
P-value (two-tailed)	0.43752

4.5.3. Heterogeneity Analysis

The Q-value was found as 497.971 with 35 degrees of freedom and $p < .001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I-squared statistic is 92.97%, which means that some 92.97% of the variance in observed effects reflects variance in true effects rather than sampling error. Tau-squared, the variance of true effect sizes is 0.046 in Fisher's Z units. Tau, the standard deviation of true effect sizes, is 0.215 in Fisher's Z units. The corresponding tau value causes a 95% prediction interval of 0.146 to 0.775, meaning that in 95% of cases, the true effect size in a new study would fall in this prediction interval (Borenstein et al., 2009). Details about heterogeneity are shown in Table 4.28.

Table 4.28. *Heterogeneity Tests for Optimism*

<i>Test of Heterogeneity</i>				Tau-squared	
Q-value	df (Q)	p	I ²	Tau-squared	Tau
497.971	35	0.000	92.970	0.046	0.215

4.5.4. Moderator Analyses

For research subquestion 2d, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). Results of the analog to the ANOVA are presented in Table 4.30. As shown in Table 4.29, cultural background ($Q = 3.227$, $df = 1$, $p = 0.072$), age group of the participants ($Q = 3.329$, $df = 1$, $p = 0.566$), PWB Scales version ($Q = 0.529$, $df = 1$, $p = 0.768$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 1.519$, $df = 1$, $p = 0.218$) did not influence the relationship between optimism and psychological well-being.

Table 4.29. *Categorical Moderator Analyses for Optimism*

Moderator Variables	Categories	u	k	Mean ES	95% CI		df	χ^2	Q_B	p
					Lower	Upper				
Cultural Background	Eastern	20	19	0.534	0.426	0.627	1	3.842	3.227	0.072
	Western	16	16							
Age Group	University Stdnts*	7	7	0.530	0.473	0.583	1	3.842	0.329	0.566
	Others	29	28							

PWB Scales	Adapted	12	12							
Adapted or				0.530	0.472	0.584	1	5.991	0.529	0.768
Original	Original	24	23							
Frequency	Infrequently	3	3							
of Usage of				0.547	0.444	0.637		3.842	1.519	0.218
the Scale	Frequently	33	32							

u = number of effect sizes; *k* = number of studies; ES = effect size; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

As shown in Table 4.30., no significant effect was found for publication year ($z = 0.74, p > .05$), sample size ($z = -0.85, p > .05$), power distance ($z = -0.85, p > .05$), motivation towards achievement and success ($z = 0.74, p > .05$), uncertainty tolerance ($z = 0.08, p > .05$), long term orientation ($z = 0.28, p > .05$), and indulgence ($z = 1.58, p > .05$). However, the relationship between optimism and psychological well-being was significantly and positively moderated by individualism scores ($z = 2.01, p < .05$). This means that there was significant heterogeneity among effect sizes in relation to individualism level of the country of origin of the participants.

Table 4.30. *Continuous Moderator Analyses for Optimism*

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	36	35	0.0065	0.0088	-0.0107	0.0238	0.74	0.457
Sample Size	36	35	-0.0001	0.0001	-0.0002	0.0001	-0.85	0.395
Power Distance	36	35	-0.0021	0.0025	-0.0069	0.0027	-0.85	0.393
Individualism	36	35	0.0045	0.0022	0.0001	0.0089	2.01	0.044*
Motivation towards Achievement and Success	36	35	0.0027	0.0037	-0.0045	0.0100	0.74	0.457
Uncertainty Tolerance	36	35	0.0002	0.0022	-0.0041	0.0044	0.08	0.935
Long Term Orientation	36	35	0.0009	0.0031	-0.0052	0.0069	0.28	0.778
Indulgence	36	35	0.0035	0.0022	-0.0008	0.0078	1.58	0.114

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

The mean effect size in studies that is highly identified with the cultural value of individualism in terms of country of origin of the participants (e.g., Australia, Spain) was 0.004 higher than the ones identified with lower individualism (e.g., Iran, India). The relationship between optimism and psychological well-being was stronger in studies, which were conducted in countries with higher individualism scores as a cultural value.

4.6. Main and Moderator Analyses for Self-Esteem and Psychological Well-Being

4.6.1. Overall Effect Size between Self-Esteem and Psychological Well-Being

The subquestion 1e in this meta-analysis is “How strong is the relationship between self-esteem and psychological well-being?” Forty-six studies yielded 50 effect sizes based on self-esteem. The mean effect size is 0.643 with a 95% confidence interval of 0.600 to 0.683 based on a random model. According to Cohen’s criteria, 0.643 is interpreted as large in terms of the magnitude of the effect size. The Z-value is 21.014 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected, and it can be concluded that the mean effect size is not precisely zero. The details of the results are presented in Table 4.31.

Table 4.31. *Effect Size and Statistical Test for Self-Esteem*

Model	<i>u</i>	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	50	0.643	0.600	0.683	21.014	0.000

Note. *u* = number of effect sizes; PE = point estimate; CI = confidence of interval

4.6.2. Analyses of Publication Bias

Fifty effect sizes regarding the relationship between self-esteem and psychological well-being are shown in the forest plot in Figure 4.9. There is no overlap among the confidence intervals, but there are a few overlaps among the effect sizes. As such, the visual exploration of the forest plot gives some clue regarding the presence of publication bias among the studies. However, among the 50 effect sizes, the overlapped ones constituted a very small portion of it (4 of them). Therefore, it can be interpreted as trivial, given the fact that the forest plot is not an objective way of publication bias evaluation.

The shape of the funnel plot seems to display some clear evidence of publication bias (see Figure 4.10.). Many studies were clustered at the right-hand side of the mean, which might imply that studies with lower effect sizes were missing either because they were not published or not reached. Moreover, the large studies at the top seem to have lower effect sizes than the small studies at the bottom. Besides, there are many missing studies on the left-hand side of the mean, that is, there is a high

possibility that studies, especially the smaller ones, with non-significant results, were not published or reached. This creates a high risk of publication bias.

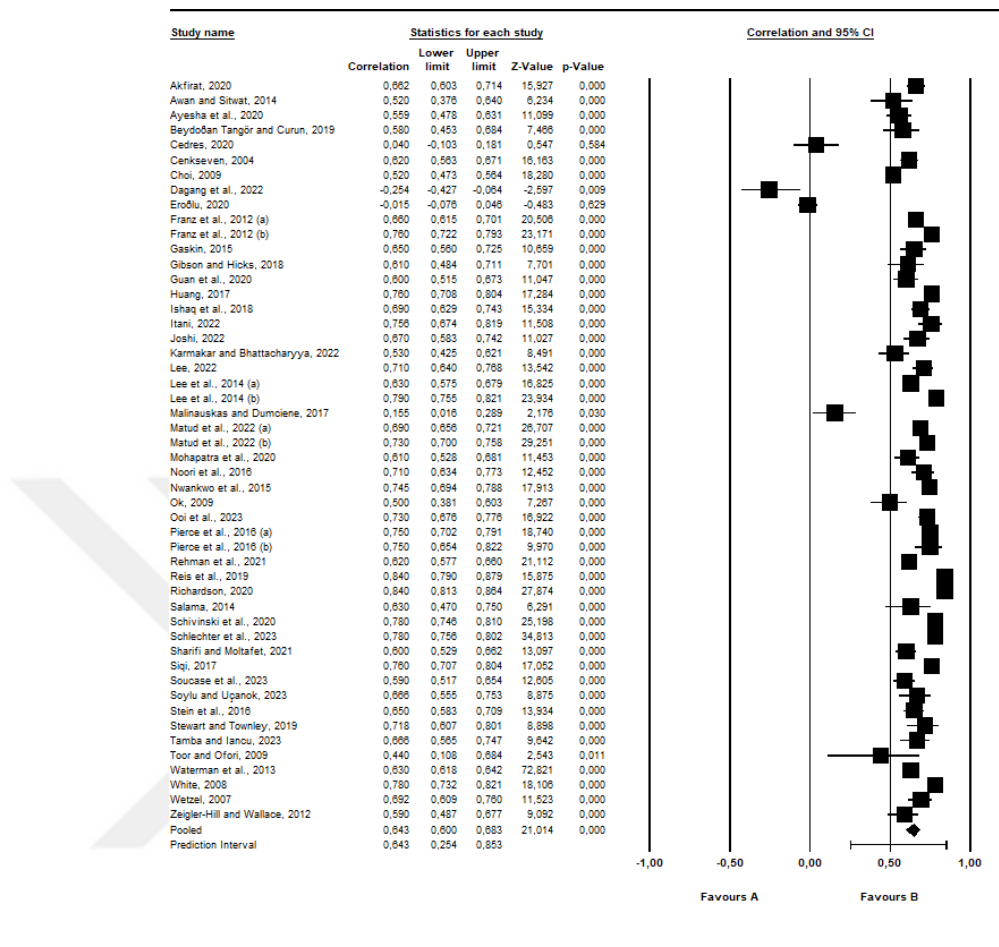


Figure 4.9. Forest Plot for Studies on Self-Esteem and PWB

As it is clear from the plot that the effect sizes are not scattered evenly around the mean effect size. The adjusted value is not the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size); hence, there are imputed studies on the plot to the left of the mean effect size based on a random-effects model. TFM imputed 15 additional studies to the left of the mean as illustrated in Figure 4.10. With additional studies, TFM calculates an adjusted mean effect size of 0.585, a smaller value than the computed one from the sample (*effect size*=0.643), leading to the conclusion that the mean effect size is overestimated in the sample. Therefore, the visual examination of the funnel plot and TFM suggests a high risk for publication bias.

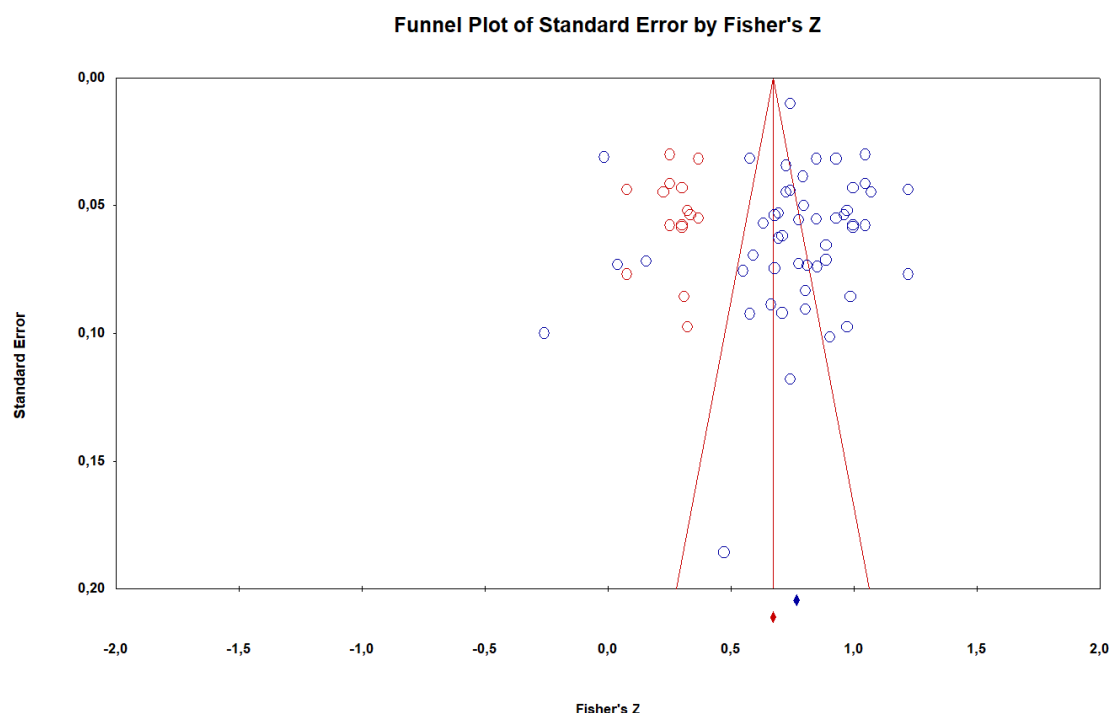


Figure 4.10. Funnel Plot for Studies on Self-Esteem and PWB

Note. Blue circles indicate observed studies.

However, this result is not supported by Egger's Regression Test as shown in Table 4.32. since the null hypothesis that “*there is no funnel plot asymmetry ($\beta_0 = 0$)*” cannot be rejected ($p > 0.05$).

Table 4.32. Egger's Regression Test Results for Self-Esteem

Intercept	0.39622
Standard error	1.40147
95% lower limit (2-tailed)	-2.42162
95% upper limit (2-tailed)	3.21406
t value	0.28272
df	48.00000
P value (2-tailed)	0.77861

In addition, as another indicator of publication bias, Table 4.33. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal an FSN of 44771.00000 meaning that 44,771 additional studies with non-significant results are necessary to invalidate the effect. The cut off point as calculated with the formula proposed by Mullen et al. (2001) was 172.196, which is much higher than one, so the results of this meta-analysis seem to be highly robust to the publication bias according to the FSN method. In other words, the results of the FSN method is suggestive of low publication bias.

Table 4.33. *Rosenthal's FSN for All Studies for Self-Esteem*

Z-value for observed studies	105.48185
p-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z for alpha	1.95996
Number of observed studies	50
Fail safe N	44771.00000

Orwin's FSN method recommended an additional 3781 studies that would be necessary to decrease the mean effect of this meta-analysis under 0.01. That is, this method eliminated the existence of high publication bias risk. The results are shown in Table 4.34.

Table 4.34. *Orwin's FSN of All Studies for Self-Esteem*

Correlation in observed studies	0.64453
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	3781.000

Begg's and Mazumdar's rank correlation based on Kendall's tau ($Q = -210$) with continuity correction is 0.09062. As shown in Table 4.35., significant symmetry was found ($z = 1.748$, $p > .05$) and the result is strongly suggestive of the absence of publication bias.

Table 4.35. *Begg's and Mazumdar's Rank Correlation for Self-Esteem*

Kendall's S statistic (P-Q)	-210.0000
Tau	0.09062
Z-value for tau	1.74826
P-value (two-tailed)	0.08042

In summary, the visual inspection of the funnel plot and TMF methods suggested the presence of publication bias whereas Egger's regression test, Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the possibility of publication bias.

4.6.3. Heterogeneity Analysis

The Q-value is found as 1490.251 with 49 degrees of freedom and $p < .001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I-squared statistic is 96.71%, which means that some

96.71% of the variance in observed effects reflects variance in true effects rather than sampling error. Tau-squared, the variance of true effect sizes is 0.061 in Fisher's Z units. Tau, the standard deviation of true effect sizes, is 0.248 in Fisher's Z units. Corresponding tau value causes a 95% prediction interval of 0.254 to 0.853, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009). Details about heterogeneity are shown in Table 4.36.

Table 4.36. *Heterogeneity Tests for Self-Esteem*

<i>Test of Heterogeneity</i>				Tau-squared	
Q-value	df (Q)	p	I ²	Tau-squared	Tau
1490.251	49	0.000	96.712	0.061	0.248

4.6.4. Moderator Analyses

For research subquestion 2e, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). Results of the analog to the ANOVA are presented in Table 4.37. As shown in Table 4.37, cultural background ($Q = 2.130$, $df = 1$, $p = 0.144$), age group of the participants ($Q = 0.096$, $df = 1$, $p = 0.756$), PWB Scales version ($Q = 2.313$, $df = 1$, $p = 0.315$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 0.059$, $df = 1$, $p = 0.809$) did not influence the relationship between self-esteem and psychological well-being.

Regarding continuous moderators, as shown in Table 4.38., no significant effect was found for publication year ($z = 0.01$, $p > .05$), sample size ($z = -0.05$, $p > .05$), power distance ($z = -1.23$, $p > .05$), individualism ($z = 0.90$, $p > .05$), motivation towards achievement and success ($z = 0.53$, $p > .05$), uncertainty tolerance ($z = -0.82$, $p > .05$), long term orientation ($z = -0.01$, $p > .05$), and indulgence ($z = 0.91$, $p > .05$).

Table 4.37. *Categorical Moderator Analyses for Self-Esteem*

Moderator Variables	Categories	u	k	Mean ES	95% CI		df	χ^2	Q_B	p
					Lower	Upper				
Cultural Background	Eastern	24	23	0.643	0.576	0.701	1	3.842	2.130	0.144
	Western	26	23							
Age Group	University Stdnts*	22	21	0.643	0.599	0.684	1	3.842	0.096	0.756

	Others	28	25							
PWB Scales	Adapted	15	14							
Adapted or				0.638	0.565	0.701	1	5.991	2.313	0.315
Original	Original	35	32							
Frequency	Infrequently	7	7							
of Usage of				0.643	0.599	0.684	1	3.842	0.059	0.809
the Scale	Frequently	43	39							

Note. *u* = number of effect sizes; *k* = number of studies; ES = effect size; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

Table 4.38. Continuous Moderator Analyses for Self-Esteem

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	50	46	0.0000	0.0077	-0.0150	0.0151	0.01	0.995
Sample Size	50	46	-0.0000	0.0000	-0.0001	0.0001	-0.05	0.959
Power Distance	48	44	-0.0027	0.0022	-0.0070	0.0016	-1.23	0.218
Individualism	48	44	0.0017	0.0019	-0.0020	0.0053	0.90	0.369
Motivation towards Achievement and Success	48	44	0.0023	0.0044	-0.0062	0.0109	0.53	0.593
Uncertainty Tolerance	48	44	-0.0015	0.0018	-0.0051	0.0021	-0.82	0.412
Long Term Orientation	48	44	-0.0000	0.0022	-0.0044	0.0043	-0.01	0.989
Indulgence	48	44	0.0016	0.0018	-0.0019	0.0051	0.91	0.363

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

4.7. Main and Moderator Analyses for Self-Efficacy and Psychological Well-Being

4.7.1. Overall Effect Size between Self-Efficacy and Psychological Well-Being

The subquestion 1f in this meta-analysis is “How strong is the relationship between self-efficacy and psychological well-being?” Forty-three studies yielded 47 effect sizes based on self-efficacy. The mean effect size is 0.540 with a 95% confidence interval of 0.489 to 0.588 based on a random model. According to Cohen’s criteria, 0.540 is interpreted as large in terms of the magnitude of the effect size. The mean effect size in the universe of comparable studies could fall anywhere in this interval. The Z-value tests the null hypothesis that the mean effect size is zero. The Z-value is 16,950 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected, and it can be concluded that, the mean effect size is not precisely zero. The details of the results are presented in Table 4.39.

Table 4.39. Effect Size and Statistical Test for Self-Efficacy

Model	<i>u</i>	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	47	0.540	0.489	0.588	16.950	0.000

Note. *u* = number of effect sizes; PE = point estimate; CI = confidence of interval

4.7.2. Analyses of Publication Bias

In Figure 4.11. below, a forest plot of all 47 effect sizes is exhibited. As the figure shows, no overlap is observed among the 95% confidence intervals, but only two of the 47 effect sizes overlapped. This amount might be evaluated as trivial as it constitutes less than 5% of the effect sizes. Hence, the visual inspection of the forest plot suggests a low risk of publication bias among the studies.

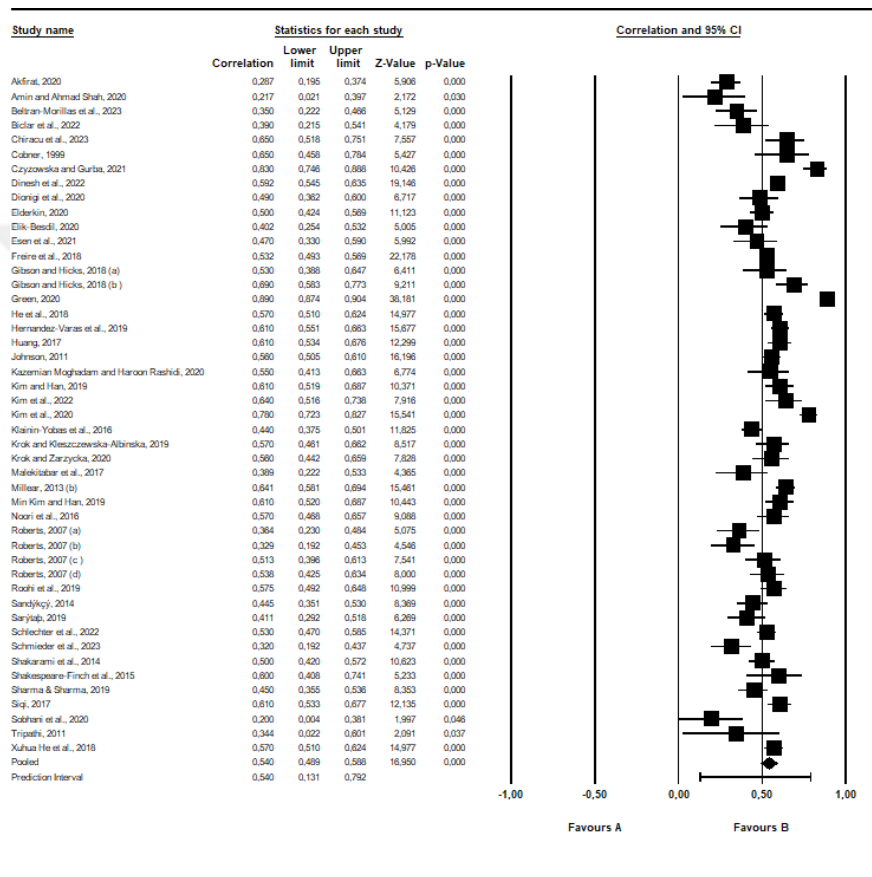


Figure 4.11. Forest Plot for Studies on Self-Efficacy and PWB

The shape of the funnel plot seems to display some evidence of symmetry since it gets wider as the standard error increases at the bottom of the shape, but not as much as it is expected in an ideal symmetry. As can be seen in Figure 4.12. below, the adjusted value is not the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size).

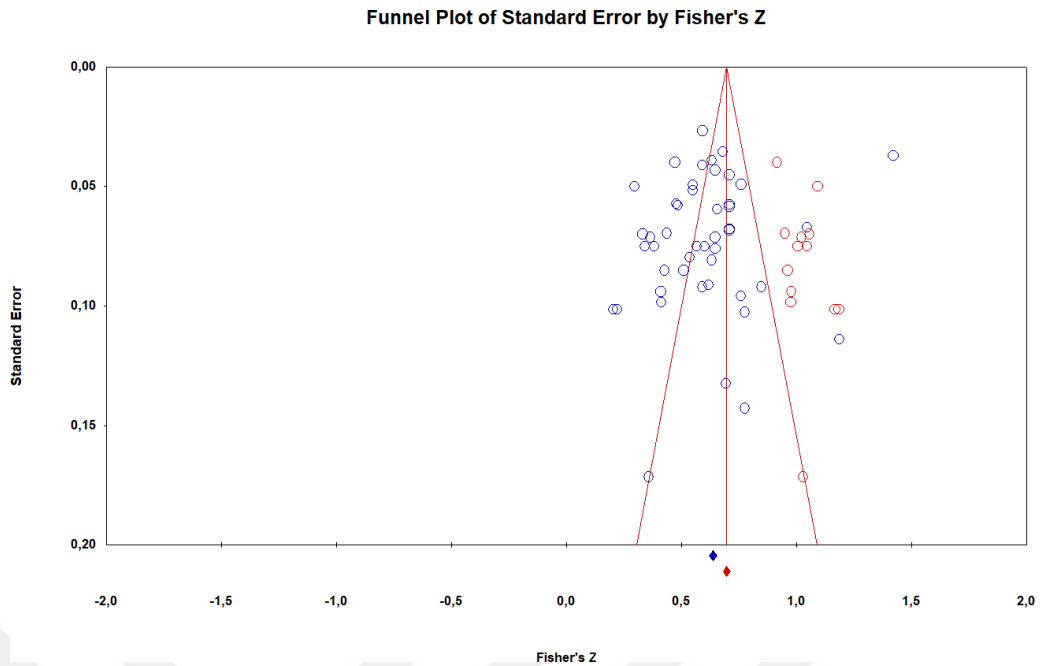


Figure 4.12. Funnel Plot for Studies on Self-Efficacy and PWB

Note. Blue circles indicate observed studies.

The suggestion of additional studies is smaller studies with larger effect sizes than the mean effect size, which increases the probability of low publication bias. TFM imputed 13 additional studies to the right of the mean as illustrated in Figure 4.12. With 13 additional studies required, TFM calculates an adjusted mean effect size of 0.602, larger value than the computed one from the sample (*effect size*=0.540), leading to the conclusion that the mean effect size is underestimated. Underestimation implies a lower risk for publication bias than overestimation. The trimmed studies were mostly to the top of the plot, which means that missing smaller studies at the bottom seems to be lower (small study effect). Another probability would be the fact that smaller studies with smaller effect sizes were not published or reached. Moreover, the dispersion of the effect sizes out of the confidence interval to the top of the funnel constitutes a risk for publication bias. In summary, there are more indicators for the lower risk of publication bias according to the visual inspection of the funnel plot.

This result is supported by Egger's Regression Test as shown in Table 4.40. In other words, Egger's regression test results showed that the high risk for publication bias seems not possible for the meta-analysis on the relationship between self-efficacy and psychological well-being. The *p* value was bigger than .05, so the null hypothesis on behalf of publication bias was rejected.

Table 4.40. *Egger's Regression Test Results for Self-Efficacy*

Intercept	-2.08483
Standard error	1.56188
95% lower limit (2-tailed)	-5.23061
95% upper limit (2-tailed)	1.06095
t value	1.33482
df	45.00000
P value (2-tailed)	0.18865

As another indicator of publication bias, Table 4.41. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal an FSN of 54404.00000 meaning that 54404 additional studies with non-significant results are necessary to invalidate the effect. Cut off point 222.057 far exceeds one, so the results of this meta-analysis seem to be highly robust to the publication bias.

Table 4.41. *Rosenthal's FSN of All Studies for Self-Efficacy*

Z-value for observed studies	66.71155
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	47
Fail safe N	54404.00000

Another indicator to explore the impact of publication bias is Orwin's FSN, which is based on practical significance rather than p-value. Table 4.42. illustrates the results of the calculations for this meta-analysis, which means that an additional 2946 studies with effect sizes of 0.01000 are necessary to bring the mean effect of this meta-analysis under 0.1, which can be called trivial in many contexts.

Table 4.42. *Orwin's FSN of All Studies for Self-Efficacy*

Correlation in observed studies	0.56259
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	2946.000

Begg's and Mazumdar's rank correlation ($Q = -56.000$) was also checked for further exploration of publication bias. Kendall's tau with continuity correction was -0.05185 . As shown in Table 4.43., significant symmetry was found ($z = 0.504$, $p = 0.614$) and the result is strongly suggestive of the absence of publication bias.

Table 4.43. *Begg's and Mazumdar's Rank Correlation for Self-Efficacy*

Kendall's S statistic (P-Q)	-56.0000
Tau	-0.05185
Z-value for tau	0.51355
P-value (two-tailed)	0.60757

4.7.3. Heterogeneity Analysis

The Q-value is found as 747.384 with 46 degrees of freedom and $p < .001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I-squared statistic is 93.84%, which means that some 93.84% of the variance in observed effects reflects variance in true effects rather than sampling error.

Table 4.44. *Heterogeneity Tests for Self-Efficacy*

Test of Heterogeneity				Tau-squared	
Q-value	df (Q)	p	I^2	Tau-squared	Tau
747.384	46	0.000	93.845	0.054	0.232

Tau-squared, the variance of true effect sizes is 0.054 in Fisher's Z units. Tau, the standard deviation of true effect sizes, is 0.232 in Fisher's Z units. The corresponding tau value causes a 95% prediction interval of 0.131 to 0.792, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009). Details about heterogeneity are shown in Table 4.44.

4.7.4. Moderator Analyses

For research subquestion 2f, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales).

Table 4.45. *Categorical Moderator Analyses for Self-Efficacy*

Moderator Variables	Categories	u	k	Mean ES	95% CI		df	χ^2	Q_B	p
					Lower	Upper				
Cultural Background	Eastern	16	16	0.539	0.472	0.599	1	3.842	1.566	0.211
	Western	31	27							
Age Group	University Stdnts*	21	17	0.540	0.488	0.588	1	3.842	0.014	0.907

	Others	26	26							
PWB Scales	Adapted	16	16							
Adapted or				0.540	0.489	0.587	2	5.991	0.563	0.755
Original	Original	31	27							
Frequency	Infrequently	17	14							
of Usage of				0.540	0.488	0.588	1	3.842	0.095	0.758
the Scale	Frequently	30	29							

Note. *u* = number of effect sizes; *k* = number of studies; ES = effect size; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

As shown in Table 4.45., country of origin ($Q = 1.566$, $df = 1$, $p > .05$), age group of the participants ($Q = 0.907$, $df = 1$, $p > .05$), PWB Scales version ($Q = 0.563$, $df = 1$, $p > .05$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 0.095$, $df = 1$, $p > .05$) did not influence the relationship between self-efficacy and psychological well-being.

Table 4.46. Continuous Moderator Analyses for Self-Efficacy

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	47	43	0.0034	0.0073	-0.0109	0.0178	0.47	0.638
Sample Size	47	43	0.0002	0.0001	-0.0001	0.0004	1.11	0.267
Power Distance	47	43	-0.0024	0.0022	-0.0068	0.0019	-1.09	0.275
Individualism	47	43	0.0006	0.0017	-0.0028	0.0040	0.36	0.715
Motivation towards Achievement and Success	47	43	0.0013	0.0038	-0.0061	0.0087	0.35	0.725
Uncertainty Tolerance	47	43	0.0013	0.0020	-0.0025	0.0052	0.68	0.497
Long Term Orientation	47	43	0.0012	0.0025	-0.0037	0.0061	0.48	0.634
Indulgence	47	43	-0.0017	0.0019	-0.0053	0.0020	-0.91	0.364

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

As to the continuous variables, see Table 4.46., no significant effect was found for publication year ($z = 0.47$, $p > .05$), sample size ($z = 1.11$, $p > .05$), power distance ($z = -1.09$, $p > .05$), individualism ($z = 0.36$, $p > .05$), motivation towards achievement and success ($z = 0.35$, $p > .05$), uncertainty tolerance ($z = 0.68$, $p > .05$), long term orientation ($z = 0.48$, $p > .05$), and indulgence ($z = -0.91$, $p > .05$).

4.8. Main Effect Analysis for Self-Control and Psychological Well-Being

4.8.1. Overall Effect Size between Self-Control and Psychological Well-Being

The subquestion 1g in this meta-analysis is “How strong is the relationship between self-control and psychological well-being?” Fifteen studies yielded 16 effect sizes based on self-control. The mean effect size is 0.431 with a 95% confidence interval of 0.354 to 0.502 based on a random model. According to Cohen’s criteria, 0.441 is interpreted as large in terms of the magnitude of the effect size. The mean effect size

in the universe of comparable studies could fall anywhere in this interval. The Z-value tests the null hypothesis that the mean effect size is zero. The Z-value is 9.946 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected, and it can be concluded that in the universe of populations comparable to those in the analysis, the mean effect size is not precisely zero. The details of the results are presented in Table 4.47.

Table 4.47. *Effect Size and Statistical Test for Self-Control*

Model	u	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	16	0.431	0.354	0.502	9.946	0.000

Note. u = number of effect sizes; PE = point estimate; CI = confidence of interval

4.8.2. Analyses of Publication Bias

In Figure 4.13. below, a forest plot of all 16 effect sizes is exhibited. There is no overlap among either the effect sizes or the confidence intervals. Therefore, the visual exploration of the forest plot shows some evidence regarding the relative absence of publication bias.

The shape of the funnel plot seems to display relative evidence of symmetry (see Figure 4.14.). The adjusted mean effect size is the same as the computed mean effect size. The Trim and Fill method suggested no study to either the left or right of the mean effect size. From this information, it can be deduced that there are no missing studies in smaller ones, especially on the left-hand side of the bottom, and no high concentration of small studies with large effect sizes on the right-hand side at the bottom of the funnel.

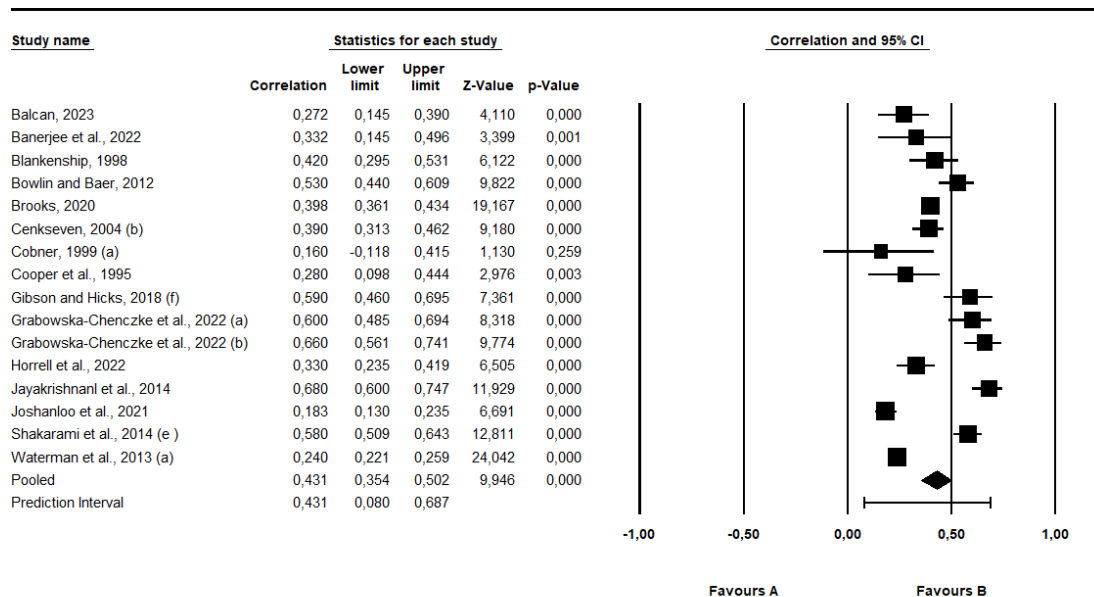


Figure 4.13. Forest Plot for Studies on Self-Control and PWB

Although the TMF did not suggest imputation, a quick look at the funnel seems to have more small studies with large effect sizes than large studies with large effect sizes. Meanwhile, smaller studies seem to show more variability than larger ones at the top, decreasing the risk of sampling error with larger sample sizes. Even so, it is not an ideal or expected funnel shape considerably free from publication bias.

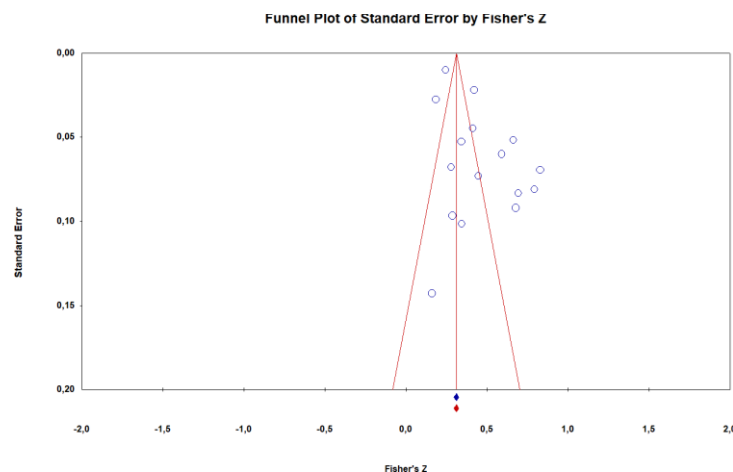


Figure 4.14. Funnel Plot for Studies on Self-Control and PWB

Note. Blue circles indicate observed studies.

Besides, more than 50% of the effect sizes were scattered out of the 95% confidence intervals (the equilateral of the funnel). Moreover, the distribution of the effect sizes gets wider as the standard error increases at the top of the shape, but a

decrease should be the case. In short, there are hints for both the absence and presence of publication bias concerning the effect sizes on the relationship between self-control and psychological well-being.

However, this controversial interpretation resulted on behalf of the existence of publication bias by Egger's Regression Test as shown in Table 4.48. The p value is lower than .05, which indicates that the meta-analysis on the relationship between self-control and psychological well-being was not free from publication bias, to the significant extent.

Table 4.48. *Egger's Regression Test Results for Self-Control*

Intercept	4.02497
Standard error	1.2537
95% lower limit (2-tailed)	1.33585
95% upper limit (2-tailed)	6.71409
t value	3.21023
df	14.00000
P value (2-tailed)	0.00629

Furthermore, as another indicator of publication bias, Table 4.49. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal an FSN of 5333.00000 meaning that 5333 additional studies with non-significant results are necessary to invalidate the effect. The computed value for Mullen et al.'s (2001) formula was 59.25, which is bigger than one, so the results of this meta-analysis seem to be highly robust to the publication bias according to this method.

Table 4.49. *Rosenthal's FSN of All Studies for Self-Control*

Z-value for observed studies	35.83422
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	16
Fail safe N	5333.00000

Another indicator to explore the impact of publication bias is Orwin's FSN, which is based on practical significance rather than p-value. Table 4.50. illustrates the results of the calculations for this meta-analysis, which means that an additional 481

studies with effect sizes of 0.01 are necessary to bring the mean effect of this meta-analysis under 0.1, which can be called trivial in many contexts.

Table 4.50. *Orwin's FSN of All Studies for Self-Control*

Correlation in observed studies	0.30054
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	481.000

Lastly, Begg's and Mazumdar's rank correlation ($Q = -6.000$) was also checked for further exploration of publication bias. Kendall's tau with continuity correction was -0.04167 . The result was not statistically significant ($z = 0.225$, $p = .821$), and suggestive of the absence of publication bias (see Table 4.51.).

Table 4.51. *Begg's and Mazumdar's Rank Correlation for Self-Control*

Kendall's S statistic (P-Q)	-6.000
Tau	-0.04167
Z-value for tau	0.22511
P-value (two-tailed)	0.82189

In conclusion, among the methods used to explore potential publication bias, the visual inspection of the funnel plot suggested a relative presence of publication bias whereas Duval's TMF, Egger's regression test, Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the possibility of publication bias.

4.8.3. Heterogeneity Analysis

The Q-value is found as 294.119 with 15 degrees of freedom and $p < 0.001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I-squared statistic is 94.90%, which means that some 94.90% of the variance in observed effects reflects variance in true effects rather than sampling error. Tau-squared, the variance of true effect sizes is 0.029 in Fisher's Z units. Tau, the standard deviation of true effect sizes, is 0.171 in Fisher's Z units. The corresponding tau value causes a 95% prediction interval of 0.080 to 0.687, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009). Details about heterogeneity are shown in Table 4.52.

Table 4.52. Heterogeneity Tests for Self-Control

Test of Heterogeneity				Tau-squared	
Q-value	df (Q)	p	I ²	Tau-squared	Tau
294.119	15	0.000	94.900	0.029	0.171

4.8.4. Moderator Analyses

For research subquestion 2g, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). As shown in Table 4.53., country of origin ($Q = 0.097$, $df = 1$, $p = 0.756$), age group of the participants ($Q = 0.000$, $df = 1$, $p = 0.997$), and PWB Scales version ($Q = 1.726$, $df = 1$, $p = 0.189$) did not influence the relationship between self-control and psychological well-being.

Table 4.53. Categorical Moderator Analyses for Self-Control

Moderator Variables	Categories	<i>u</i>	<i>k</i>	Mean ES	95% CI		<i>df</i>	χ^2	Q_B	<i>p</i>
Cultural Background	Eastern	11	10	0.431	0.347	0.508	1	3.842	0.097	0.756
	Western	5	5							
Age Group	University Stdnts*	5	5	0.431	0.347	0.509	1	3.842	0.000	0.997
	Others	11	10							
PWB Scales Adapted or Original	Adapted	2	2	0.407	0.256	0.539	1	3.842	1.726	0.189
	Original	14	13							
Frequency of Usage of the Scale	Infrequently	8	7	0.436	0.254	0.588	1	3.842	7.357	0.007*
	Frequently	8	8							

Note. *u* = number of effect sizes; *k* = number of studies; ES = effect size; CI = confidence interval; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

However, the frequency of usage of the scale used to assess key individual psychological resources ($Q = 7.357$, $df = 1$, $p = 0.007$) significantly and positively moderated the relationship between self-control and psychological well-being. In other words, the effect sizes of the studies that utilized infrequently used assessment tools were higher than the studies that utilized frequently used assessment tools.

To investigate the effect of continuous moderators (year of publication, sample size, and Hofstede's six cultural dimensions), nine separate meta-regression models with random effects utilizing unrestricted maximum likelihood estimation were conducted. As shown in Table 4.54., no significant effect was found for publication year ($z = 1.32, p > .05$), sample size ($z = -1.49, p > .05$), power distance ($z = -1.65, p > .05$), motivation towards achievement and success ($z = 1.68, p > .05$), uncertainty tolerance ($z = -0.28, p > .05$), long term orientation ($z = 0.54, p > .05$), and indulgence ($z = -1.02, p > .05$). However, the relationship between self-control and psychological well-being was significantly and negatively moderated by individualism ($z = 5.42, p < .05$). In other words, there was significant heterogeneity among the effect sizes in relation to individualism. The effect sizes in studies that are highly identified with the cultural value of individualism in terms of the country of origin of the participants (e.g., the USA, Australia) 0.0059 lower than the ones identified with lower individualism (e.g., Iran, India). In other words, the relationship between self-control and psychological well-being was stronger in studies, which were conducted in countries with lower individualism scores as a cultural value.

Table 4.54. *Continuous Moderator Analyses for Self-Control*

Moderator Variables	<i>u</i>	<i>k</i>	β	SE	95% CI		<i>z</i>	<i>p</i>
					Lower	Upper		
Publication Year	16	15	0.0047	0.0055	-0.0060	0.0155	0.86	0.3888
Sample Size	16	15	-0.0000	0.0000	-0.0001	0.0000	-1.49	0.1366
Power Distance	16	15	0.0027	0.0028	-0.0028	0.0083	0.98	0.3288
Individualism	16	15	-0.0059	0.0026	-0.0110	-0.0007	-2.23	0.0257*
Motivation towards Achievement and Success	16	15	0.0047	0.0058	-0.0066	0.0161	0.82	0.4104
Uncertainty Tolerance	16	15	0.0011	0.0024	-0.0037	0.0059	0.46	0.6449
Long Term Orientation	16	15	0.0013	0.0032	-0.0059	0.0062	0.54	0.4542
Indulgence	16	15	-0.0026	0.0026	-0.076	0.0024	-1.02	0.3091

Note. *u* = number of effect sizes; *k* = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

4.9. Main Effect Analysis for Sense of Coherence and Psychological Well-Being

4.9.1. Overall Effect Size between Sense of Coherence and Psychological Well-Being

The subquestion 1h in this meta-analysis is “How strong is the relationship between a sense of coherence and psychological well-being?” The mean effect size is 0.676 with a 95% confidence interval of 0.621 to 0.725 based on a random model. According to Cohen's criteria, 0.621 is interpreted as large in terms of the magnitude of the effect size. The mean effect size in the universe of comparable studies could fall anywhere

in this interval. The Z-value tests the null hypothesis that the mean effect size is zero. The Z-value is 16,683 with $p < .001$. Using a criterion alpha of 0.05, the null hypothesis was rejected, and it can be concluded that in the universe of populations comparable to those in the analysis, the mean effect size is not precisely zero. The details of the results are presented in Table 4.55.

Table 4.55. Effect Size and Statistical Test for Sense of Coherence

Model	u	Effect size	95% CI		Statistical test	
		PE	Lower	Upper	Z-value	P-value
Random	13	0.676	0.621	0.725	16.683	0.000

Note. u = number of effect sizes; PE = point estimate; CI = confidence of interval

4.9.2. Publication Bias

Ten studies yielded 13 effect sizes based on a sense of coherence. In Figure 4.15. below, a forest plot of all 13 effect sizes is exhibited.

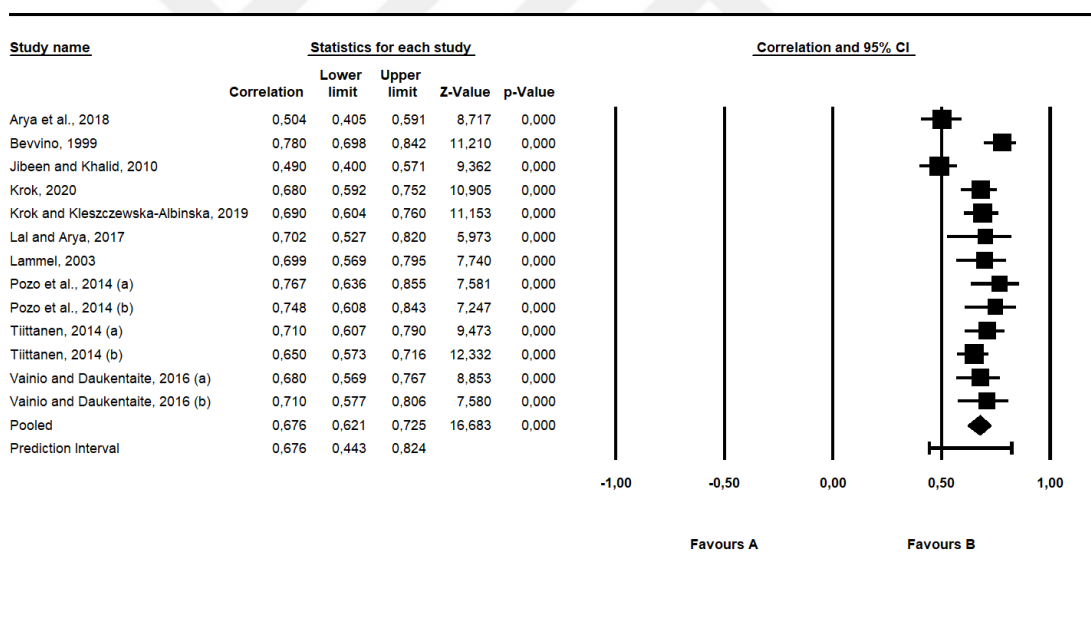


Figure 4.15. Forest Plot for Studies on Sense of Coherence and PWB

The forest plot displayed no overlap between point estimates (black squares) as well as among confidence intervals. These two indicators can be evaluated as positive in terms of the absence of homogeneity between the studies. There is considerable variability between the studies.

Nevertheless, the shape of the funnel plot seems to display some clear evidence of publication bias. The high concentration of the studies at the right-hand side of the mean might imply that smaller studies with lower effect sizes were missing either because they were not published or not reached. Moreover, the large studies at the top seem to have lower effect sizes than the small studies at the bottom. This might be due to the possibility that studies with small samples and large effect sizes tended to be published and/or reached for a sense of coherence. On the other hand, only three of the effect sizes were scattered out of the 95% confidence intervals (the equilateral of the funnel), which is an indicator of low publication bias.

As can be seen in Figure 4.16. below, the adjusted value is not the same as the computed mean effect size (the blue diamond shape represents the computed mean effect size, and the red diamond symbolizes the adjusted mean effect size); hence there are imputed studies on the plot when we are examining for missing studies to the left of the mean effect size based on a random-effects model. TFM imputed 4 additional studies to the left of the mean and suggested no imputed study to the right.

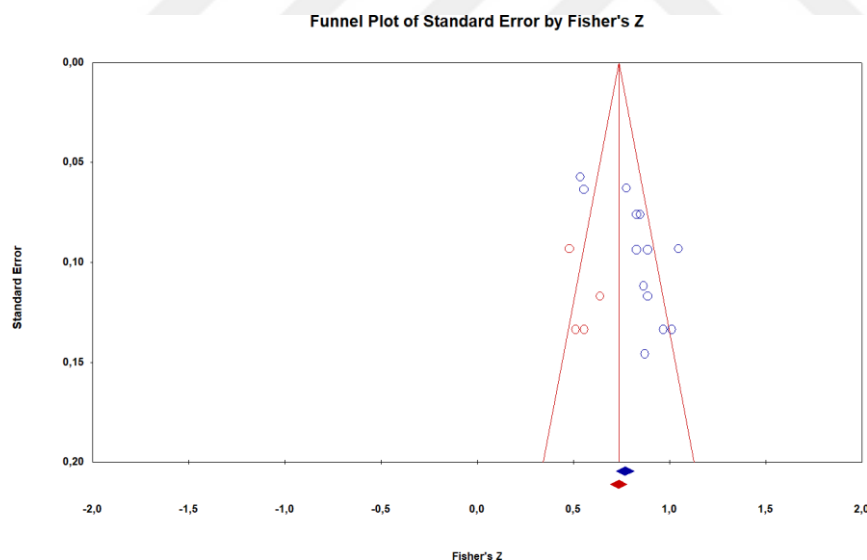


Figure 4.16. Funnel Plot for Studies on Sense of Coherence and PWB

Note. Blue circles indicate observed studies.

With additional studies, TFM calculates an adjusted mean effect size of 0.626, a lower value than the computed one from the sample (*effect size*=0.676), leading to the conclusion that the mean effect size is overestimated in the sample. In sum, visual inspection of the funnel plot and TFM methods suggested a high risk for publication bias.

This result is supported by Egger's Regression Test as shown in Table 4.56., since the null hypothesis that “*there is no funnel plot asymmetry ($\beta_0 = 0$)*” is rejected ($p < .05$).

Table 4.56. *Egger's Regression Test Results for Sense of Coherence*

Intercept	4.92416
Standard error	1.37476
95% lower limit (2-tailed)	1.89832
95% upper limit (2-tailed)	7.94999
t value	3.58182
df	11.00000
P value (2-tailed)	0.00430

In addition, as another indicator of publication bias, Table 4.57. shows the results of Rosenthal's Fail-Safe N (FSN) calculations, which reveal an FSN of 3620.00000 meaning that 3620 additional studies with non-significant results are necessary to invalidate the effect. Mullen et. al.'s (2001) formula was 48.266 (>1) so the results of this meta-analysis seem to be highly robust to the publication bias according to this method.

Table 4.57. *Rosenthal's FSN of All Studies for Sense of Coherence*

Z-value for observed studies	32.76196
P-value for observed studies	0.00000
Alpha	0.05
Tails	2
Z value for alpha	1.95996
Number of observed studies	13
Fail safe N	3620.00000

Another indicator to explore the impact of publication bias is Orwin's FSN, which is based on practical significance rather than p-value.

Table 4.58. *Orwin's FSN of All Studies for Sense of Coherence*

Correlation in observed studies	0.64626
Criterion for a 'trivial' correlation	0.01000
Mean correlation in missing studies	0.00
Fail safe N	987.000

Table 4.58. illustrates the results of the calculations for this meta-analysis, which means that an additional 987 studies with effect sizes of 0.01000 are necessary

to bring the mean effect of this meta-analysis under 0.10, which can be called trivial in many contexts.

Begg's and Mazumdar's rank correlation generated Kendall's tau ($Q=33$) with continuity correction as 0.41026. As seen in Table 4.59., significant symmetry was found ($z=1.952$, $p>0.05$) and the result is strongly suggestive of the absence of publication bias. However, the p-value is quite close to .05.

Table 4.59. *Begg's and Mazumdar's Rank Correlation for Sense of Coherence*

Kendall's S statistic (P-Q)	33.0000
Tau	0.41026
Z-value for tau	1.95228
P-value (two-tailed)	0.05090

In summary, six different methods were used to explore potential publication bias for the relationship between optimism and psychological well-being. The visual inspection of the funnel plot, TMF methods, and Egger's regression test suggested the presence of publication bias whereas Rosenthal's FSN, Orwin's FSN, and Begg's and Mazumdar's rank correlation methods eliminated the high possibility of publication bias.

4.9.3. Heterogeneity Analysis

The Q-value is found as 48.213 with 12 degrees of freedom and $p < .001$. Using a criterion alpha of 0.001, we can reject the null hypothesis that the true effect size is the same in all these studies. The I-squared statistic is 75.11%, which means that some 75.11% of the variance in observed effects reflects variance in true effects rather than sampling error.

Tau-squared, the variance of true effect sizes is 0.022 in Fisher's Z units. Tau, the standard deviation of true effect sizes, is 0.150 in Fisher's Z units. The corresponding tau value causes a 95% prediction interval of 0.443 to 0.824, meaning that in 95% of cases, the true effect size in a new study would fall inside this prediction interval (Borenstein et al., 2009). Details about heterogeneity are shown in Table 4.60.

Table 4.60. *Heterogeneity Tests for Sense of Coherence*

<i>Test of Heterogeneity</i>	<i>Tau-squared</i>
------------------------------	--------------------

Q-value	df (Q)	p	I ²	Tau-squared	Tau
48.213	12	0.000	75.111	0.022	0.150

4.9.4. Moderator Analyses

For research subquestion 2h, potential sources of heterogeneity were examined first with categorical moderators (cultural background, age group, PWB Scales version, frequency of the usage of scales). Results of the analog to the ANOVA are presented in Table 4.61. As shown in Table 4.61, age group of the participants ($Q = 3.329$, $df = 1$, $p = .566$), PWB Scales version ($Q = 0.529$, $df = 1$, $p = .768$), and the frequency of usage of the scale used to assess key individual psychological resource ($Q = 1.519$, $df = 1$, $p = .218$) did not influence the relationship between optimism and psychological well-being.

Table 4.61. *Categorical Moderator Analyses for Sense of Coherence*

Moderator Variables	Categories	u	k	Mean ES	95% CI		df	χ^2	Q_B	p
					Lower	Upper				
Cultural Background	Eastern	3	3	0.621	0.411	0.768	1	3.842	27.207	0.000*
	Western	10	7							
Age Group	University Stdnts*	4	3	0.677	0.620	0.727	1	3.842	0.552	0.458
	Others	9	7							
PWB Scales Adapted or Original	Adapted	5	3	0.677	0.619	0.727	1	3.842	0.005	0.946
	Original	8	7							
Frequency of Usage of the Scale	Infrequently	2	2	0.677	0.619	0.728	1	3.842	0.135	0.713
	Frequently	11	8							

Note. u = number of effect sizes; k = number of studies; ES = effect size; CI = confidence interval; Stdnts= Students; MTTAS= Motivation towards achievement and success; LTO= Long term orientation; UT= Uncertainty tolerance

However, country of origin significantly moderated the relationship between sense of coherence and psychological well-being ($Q = 27.207$, $df = 1$, $p < .01$). The effect sizes of the studies with participants from Western countries were higher than the Eastern ones.

To investigate the effect of continuous moderators (year of publication, sample size, and Hofstede's six cultural dimensions), nine separate meta-regression models

with random effects utilizing unrestricted maximum likelihood estimation were conducted. As shown in Table 4.62., no significant effect was found for publication year ($z = -0.84, p > .05$), power distance ($z = -1.03, p > .05$), and motivation towards achievement and success ($z = -0.20, p > .05$). However, sample size ($z = 1.15, p > .05$), uncertainty tolerance ($z = -0.28, p > .05$), long-term orientation ($z = -0.25, p > .05$), and indulgence ($z = 1.15, p > .05$) significantly moderated the relationship between sense of coherence and psychological well-being. The effect sizes of the studies with lower sample sizes were 0.0016 higher than the larger ones. Moreover, the effect sizes of studies from countries with higher individualism (e.g., Sweden, Spain), long-term orientation (e.g., India, the USA), and indulgence (e.g., Sweden and the USA) were 0.0036, 0.0088 and 0.0015 higher than the ones with lower individualism (e.g., Pakistan, India), long-term orientation (e.g., Pakistan), and indulgence (e.g., Pakistan, Poland) respectively.

Table 4.62. *Continuous Moderator Analyses for Sense of Coherence*

Moderator Variables	u	k	β	SE	95% CI		z	p
					Lower	Upper		
Publication Year	13	10	-0.0072	0.0085	-0.0239	0.0096	-0.84	0.4007
Sample Size	13	10	-0.0016	0.0003	-0.0022	-0.0010	-5.29	0.0000*
Power Distance	13	10	-0.0028	0.0028	-0.0083	0.0026	-1.03	0.3043
Individualism	13	10	0.0036	0.0013	0.0010	0.0062	2.73	0.0064*
Motivation towards Achievement and Success	13	10	-0.0004	0.0021	-0.0045	0.0037	-0.20	0.8413
Uncertainty Tolerance	13	10	0.0005	0.0020	-0.0035	0.0045	0.26	0.7970
Long Term Orientation	13	10	0.0088	0.0045	0.0001	0.0176	1.98	0.0472*
Indulgence	13	10	0.0033	0.0015	0.0004	0.0062	2.25	0.0245*

Note. u = number of effect sizes; k = number of studies; SE = standard error; CI = confidence interval; β = regression coefficient

4.10. Summary of the Results

Based on the results of the main effect and subgroup analyses of the data provided by 170 studies and 251 effect sizes investigating the association between key individual psychological resources and psychological well-being. Moreover, moderator analyses were made on main and subgroup levels as well. The following conclusions can be drawn from this meta-analysis:

- 1) The composite of all seven key individual psychological resources is significantly associated with psychological well-being, and the magnitude of the mean effect size is large.
- 2) Resilience is associated with psychological well-being, and the magnitude of the effect size is large.

- 3) Hope is associated with psychological well-being, and the magnitude of the effect size is large.
- 4) Optimism is associated with psychological well-being, and the magnitude of the effect size is large.
- 5) Self-esteem is associated with psychological well-being, and the magnitude of the effect size is large.
- 6) Self-efficacy is associated with psychological well-being, and the magnitude of the effect size is large.
- 7) Self-control is associated with psychological well-being, and the magnitude of the effect size is medium to large.
- 8) Sense of coherence is associated with psychological well-being, and the magnitude of the effect size is large.
- 9) Among these seven key individual psychological resources, the top three highest effect sizes belong to sense of coherence, self-esteem, and resilience.
- 10) The overall relationship between key individual psychological resources and psychological well-being was not moderated by any of the moderators.
- 11) The relationship between hope and psychological well-being was negatively moderated by indulgence.
- 12) The relationship between optimism and psychological well-being was positively moderated by individualism.
- 13) The relationship between self-control and psychological well-being was negatively moderated by individualism.
- 14) The relationship between sense of coherence and psychological well-being was negatively moderated by sample size.
- 15) The relationship between a sense of coherence and psychological well-being was positively moderated by the country of origin of the participants of the studies.
- 16) The relationship between a sense of coherence and psychological well-being was positively moderated by individualism.
- 17) The relationship between a sense of coherence and psychological well-being was positively moderated by long-term orientation.
- 18) The relationship between a sense of coherence and psychological well-being was positively moderated by indulgence.



CHAPTER 5

DISCUSSION

This chapter starts with a discussion of the descriptive results including all the categories employed in the coding process of the studies. Subsequently, the results pertinent to each research question are discussed, and explicit conclusions are drawn. The chapter concludes by presenting the implications and offering suggestions for practice and further research.

5.1. Discussion of the Descriptive Results

To begin with, regarding the publication year of the studies, it is evident that the scientific study of psychological resources and psychological well-being has become widespread since 2010. This aligns with the momentum gained by the positive psychology movement in the empirical arena after 2000s (Seligman & Csikszentmihalyi, 2000). Before that period, theoretical efforts to introduce positive psychology within the psychology discipline were more common. The published and unpublished studies in this meta-analysis showed a dramatic increase with the onset of the 2010s. This trend may also be related to a paradigm shift regarding the definition of mental health, moving from the absence of pathology to a salutogenic point of view.

Of seven key individual psychological resources, resilience ($u=60$, $k= 58$) seems to be the most widely studied resource concerning psychological well-being. Self-esteem ($u=50$, $k= 46$) and self-efficacy ($u=47$, $k= 43$) follow as the second and third most studied resources. This can be attributed to the increased research interest in these constructs since 2010. Moreover, resilience is measured using the Connor-Davidson Resilience Scale (2003) in nearly all of the studies included in this meta-analysis. This scale has been adapted to various populations and languages, including Danish, French, Chinese, Brazilian, Russian, Hungarian, Iranian, Turkish, Peruvian,

Australian, Malayalam, Indian, Portuguese, Colombian, Nigerian, and Cambodian. Therefore, the diverse cultural adaptations of this scale likely contribute to the flourishing of studies on resilience. Likewise, the self-esteem construct in the meta-analyzed studies is predominantly measured by the Rosenberg Self-Esteem Scale (1989), which is widely translated and regarded as the benchmark scale for measuring self-esteem (see Schmitt & Allik, 2005). The same applies to the Generalized Self-Efficacy Scale of Schwarzer and Jerusalem (1995).

Moreover, resilience holds a special place among the other key individual psychological resources. Kobasa (1979) and Connor and Davidson (2003) stated that resilience incorporates many other key individual psychological resources, such as hope, self-efficacy, self-esteem, and optimism. Therefore, resilience could be deemed as a higher-order construct encompassing different components. The heightened interest in resilience research might have stemmed from its complexity and multifaceted nature.

Concerning gender distribution in the study samples, the participation of females was significantly higher than that of males (52.138 females, and 32.404 males). This confirms a general trend that women are generally more inclined to participate in research studies than men (Curtin et al, 2000; Moore & Tarnai, 2002). Despite this, there are 84 samples in this meta-analysis with relatively balanced gender. However, only three studies did not use a binary approach in defining the gender characteristics of the participants. The remaining ones limited the gender to two options: female and male.

The age group of the participants was categorized as “university students” versus “others” for moderation analyses. Of all the 251 effect sizes, 38% were calculated from samples consisting solely of university students. The “other” category predominantly composed of adults aged between 25 and 50, with only a few studies included samples from elders and senior adults. Meanwhile, some participants in the “others” category were aged between 18 and 25 as well, suggesting that the proportion of university students is higher than 38%. This picture implies that most of the research studies in this meta-analysis focused on younger samples. While interpreting the results, this information should not be overlooked. Despite no moderating effect of age

group was found for any of the research questions, this does not imply that the relationships are consistent across age groups. The broad age ranges in the “others” prevented reaching a more refined conclusion about different developmental stages. Nevertheless, it can be confidently stated that the findings of this meta-analysis are mostly based on emerging adult participants. Notably, none of the studies included samples of NEET (Young People Not in Education, Employment, or Training aged between 15 and 24), or if they did, the author(s) did not report this information. According to the statistics released by the International Labor Organization (ILO) in 2023, over one-fifth of people worldwide (21.7%) were classified as NEETs (ilostat.ilo.org). Therefore, this meta-analysis is primarily reflecting a specific subset of young adults who are currently engaged in education.

Regarding the country of origin of the participants, the majority were from Asia, Europe, and North America, with Asia having the highest representation. This is noteworthy because WEIRD (Western, Educated, Industrialized, Rich, and Democratic) populations are more represented in social sciences research. According to Zhao (2021), the majority of samples in the social sciences consist of undergraduate students from Euro-American schools, leading to a sample nonrepresentation problem. Despite recognizing this issue, there has not been any progress. Moreover, the prototypical psychology sample of Euro-American undergraduate students has also been coined as WEIRD by Henrich et al. (2010). In this meta-analysis, 80 samples included university students, but the high representation of Asian countries suggests a more diverse and rich representation. Additionally, similar to most of the other research studies, the representation of African countries remains very low.

The participants' country of origin was categorized as “Western” ($u=128$, $k=87$) and “Eastern” ($u=123$, $k=83$) for moderator analyses. The distribution was quite balanced in terms of both the number of primary studies and effect sizes. However, this does not imply that the country of origin is the sole parameter to capture the full complexity of cultural characteristics in these countries. Given the increasing human mobility in the last decades, most of the countries where academic research is conducted have received millions of immigrations with different statuses and reasons (refugees, immigrants, etc.). Consequently, labeling a country with definitive cultural characteristics will go no further than a futile effort. The same situation is evident in

Hofstede's six cultural dimensions and the scores assigned to each country on each dimension periodically. Moreover, Western countries in this meta-analysis were mostly from the USA, Canada, and West Europe all of which have the highest number of immigrants, including Türkiye as well. The current and future world is inevitably multicultural. This is not only because of migrations, but also because of the developments in technology. Social media is a striking phenomenon that almost united millions of people from many parts of the world under one roof. In some countries (nearly all of them are African countries, and the other is North Korea, retrieved from statista.com on July 1, 2024), internet penetration rates are low, but these countries are also the ones with lower academic production as well. The bottom line is that the world is becoming a big village where people can affect and be affected by each other in seconds.

Another descriptive finding relates to whether the studies used the original or adapted version of the PWB Scales. Sixty-five percent of the effect sizes were calculated using the original version of the PWB Scales. In contrast, seventy-eight of 251 effect sizes were computed from countries whose official language is not English. This is an interesting result, which might pose a potential confounding factor and a serious problem for the validity issue. Participants who filled out the original English version of the scales were likely to do so in a second language. Completing the scales in a language other than one's native language may pose a threat to the validity of the results.

The final descriptive finding was the frequency of the scales used to assess key individual psychological resources. Of the 251 effects sizes, 180 were produced using scales that have been frequently utilized in the literature on key individual psychological resources (The Rosenberg Self-Esteem Scale, Connor-Davidson Resilience Scale, The Life-Orientation Test, The Sense of Coherence Scale, The Adult Hope Scale, The Locus of Control Scale, and The General Self-Efficacy Scale). This finding can be discussed from two perspectives. Firstly, the usage of similar scales across studies might contribute to the consistency of the measurement of the same construct with the same tool. The high prevalence of the usage of these measurement tools might be an indicator for their psychometric quality across studies and their cross-cultural validity. Despite their years of development - 1986, 2003, 1994, 1987,

1991, and 1995, respectively- these scales continue to retain their status as essential and timeless measurement tools in the literature.

5.2. Discussion of the Main Analysis

This meta-analysis aimed to investigate the extent of the relationship between key individual psychological resources (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence) and psychological well-being, as developed and measured by Ryff (1989a). A total of 251 effect sizes from 170 independent studies were included in the meta-analysis. The overall effect size of this relationship was calculated as 0.589, which represents a large effect size according to the criteria of Cohen (1988). The total sample consisted of 94,825 participants across the 170 studies. Although some details are lost about the other studies, including diverse sorts of results gives a broad picture that may be used to draw generalizations, which is the main goal of any type of study synthesis (Cooper & Hedges, 2009). While this result cannot assure that key individual psychological resources play a vital role in and are essential for one's psychological well-being, it indicates that key individual psychological resources are related to psychological well-being in populations aged 18 and over, and this association is nonignorable. The study further confirms the importance of psychological resources in maintaining the psychological well-being of individuals, aligning with both key resource and multiple component resource theories. However, these two theories are not limited to the seven key individual psychological resources examined here. For example, social support is the most prominent resource of key resource theories, but this construct is not studied in this meta-analysis because it is conceptualized as a process (Barrera, 1986) and a complex meta-construct (Hobfoll, 2002) unlike personality-based resources.

The results showed that the studies in this meta-analysis were heterogeneous, suggesting that moderator analyses could be conducted to explore this heterogeneity. Starting from this, several categorical and continuous moderators were tested with the main group. However, none of the variables significantly moderated the relationship between key individual psychological resources and psychological well-being. To begin with the year of publication, this meta-analysis covered available studies published between 1998-2023, which makes a total of 25 years. During these 25 years,

there have been various changes in most places of the world. As listed by Jessica Booth (2019) in Business Insider, the global population is exploding, with more people living in cities, the growth of buildings incredibly tall, the release of the Internet, social media penetration into our lives, dramatic increase in the number of people having smart mobile phones, climate change, terrorist attacks, and wars have transformed the people and the paradigms regarding human life. Epidemics and pandemics (especially Covid-19), economic crises, migrations of any kind (especially refugee influx), and the rise of capitalism might be the other areas that have an impact worldwide. These changes have certainly affected people on various individual, social, and cultural levels. The paradigm of positive psychology has started to become widespread in the beginnings of 2000's. Since then, the research on positive constructs in psychology has spurred and the dominance of pathology-based literature has diminished. The finding that the year of publication did not moderate the relationship between key individual psychological resources and psychological well-being might be interpreted as the timeless relevance of psychological resources for better functioning in human life.

The sample size is another moderator examined to be a potential source for heterogeneity. Because as the sample size increases, the effect size(s) tend to increase as well. There are variety of sample sizes of the studies but all of them are above 30 (minimum acceptable size for correlational study as a rule of thumb by Fraenkel & Wallen, 1990). The average sample size for the 251 effect sizes was 377.788, the median was 200, and the mode was 100 with a standard deviation of 893.535. One hundred ninety-three out of 251 sample sizes were equal or lower than the average. From this information, it can be concluded that most of the sample sizes are scattered around the mean. The nonsignificant effect of sample size as a moderator might have stemmed from this situation.

Age group was another moderator that had no moderating impact in the relationship between key individual psychological resources and psychological well-being. University students versus others (adults, senior adults, elders) were the two categories created and used as a dummy variable. This result states that no matter which age group the participants belong to, the relationship between the two did not change. Excluding individuals under 18 years-old, the relationship seems to be strong for all age groups.

All the studies in this meta-analysis used the PWB Scales as the assessment tool for psychological well-being. Out of 251 effect sizes, 164 of them measured psychological well-being with the original version of the PWB Scales. Byrne (2016) discussed the disadvantages of scale adaptation without ignoring its advantages, and her caveats were about decreasing serious biasing effects. Based on the premise that some of the adapted versions of the PWB Scales might have some risks for biasing, the two version of the scale were tested as moderator. However, the mean effect size did not differ as a function of the PWB Scales version. This might be due to the fact that the distribution of the number of adapted and original versions were quite uneven, or something else.

The other moderator variable was the frequency of the usage of the scale to assess key individual psychological resources. Frequently used scales in the literature for a specific domain might imply its psychometric quality and cross-cultural validity. Drawing from this point, used scales in the studies were divided into two as frequently used and infrequently used. Out of 251 effect sizes, 180 of them utilized frequently used scales like Connor-Davidson Resilience Scale, Rosenberg Self-Esteem Scale, and The Life Orientation Test. However, this categorization used as a moderator did not make a difference in the mean effect size. This might also be because of the uneven distribution between the two categories, or something else that cannot be detected.

In terms of the country of origin of the participants, no moderation was evident, too. Although many practices and theoretical tenets of positive psychology take their roots in Eastern cultures (e.g., mindfulness, meditation, spirituality, humility, and gratitude), the results of this meta-analysis showed that the extent of the relationship between key individual psychological resources and psychological well-being did not differ between participants from both Western and Eastern countries. This can be interpreted with the universality of the constructs (resilience, hope, optimism, self-esteem, self-efficacy, self-control, and sense of coherence). In other words, these resources might be empowering people for better functioning in their lives and more fulfillment regardless of their country of origin. Even though positive psychology has been institutionalized as a global phenomenon, Cabanas (2018) criticized positive psychology as being characterized by a strong individualistic bias that contains the core belief of neoliberal ideology. It should be emphasized that most of the

questionnaires used to assess these resources are Western-based. The items were written by authors from Western academia, especially those from Euro-American cultural roots (Christopher, 1999; Joshanloo, 2014). A specific population (educated or currently in education, urban, mostly female) through the use of widely used preexistent measures of key individual psychological resources and psychological well-being. These measures include normative prescriptions for an ideal person and a good life based on claims about the nature of self, where the individual is at the center of primary reality. A person with high self-esteem in France or the states from North America would be depicted quite differently than in Malaysia, China, or India. Even if the descriptions or profiles would be defined with Euro-American cultural codes (identified with individualistic moral visions), the resources by themselves seems to say something similar among people, or about human. In addition, this thing is probably saying that no matter how old you are and where you are from, as a human, your psychological well-being might be strongly related to the resources you have. As much as you have these resources, you will accept yourself more, have more positive relationships with others, feel more autonomous, have more sense of mastery of your environment, have more meaning and purpose in your life, and be growth-oriented.

With an aim to explore the heterogeneity from a cultural perspective in addition to the Western and Eastern binary, Hofstede's six cultural dimensions were tested as moderators in the relationship between key individual psychological resources and psychological well-being. However, in any of the six dimensions, no moderating effect was found. This crosscheck of cultural context generated similar results. The strong relationship regardless of cultural dynamics might be interpreted as the universality of the key individual psychological resources as basic psychological needs. Drawing on self-determination theory (Ryan & Deci, 2000, 2017), the key individual psychological resources might be elaborated as a motivational basis for psychological well-being. Indeed, the elements of self-determination theory overlap with both key individual psychological resources and psychological well-being in some ways. For example, competence as the theory claims to be a universal psychological human need is closely related to self-efficacy, self-control, and a sense of coherence. Relatedness and autonomy, the other two basic needs according to the theory, are also two of Ryff's six dimensions of the psychological well-being model. Besides, the key individual

psychological resources and psychological well-being connection can be explained from the perspective of people's inherent growth tendencies.

The culture-free tendency of psychological well-being was supported by some empirical studies. In a longitudinal study with four-time phases of data collection, Kasmih and Abu-Rayyya (2014) compared immigrants from 49 different countries in terms of Hofstede's four cultural value dimensions (individualism, power distance, uncertainty avoidance, and motivation towards achievement and success) and the participants' well-being scores. They found no support for the link between Hofstede's global cultural dimension index and well-being at T1, T2, or T3. Kazarian (2005) found no difference in psychological well-being as a function of individualism/collectivism among Muslim and Christian university students in Lebanon. On the contrary, there are empirical evidence that shows the affectability of psychological well-being in the context of cultural values. Based on a multi-level approach, Lawrie et al. (2020) found that older age was related to lower well-being in participants ($N=64,228$) from countries higher in uncertainty avoidance than the ones from lower uncertainty avoidance. Another cross-cultural study reported significantly higher psychological well-being and self-esteem in North American participants than in Chinese (Kim et al., 2016). The impact of cultural orientation on psychological well-being seems controversial based on individual studies, but the result of this meta-analysis with the main group did not differ by the cultural orientations of the participants' country of origin.

The validity of the findings of meta-analyses and systematic reviews has been seriously threatened by publication bias (Gurevitch et al., 2018). Therefore, if there is a publication bias (including ignorance or suppression of studies with less significant results and/or smaller samples by the author(s) and editor(s), then the validity of the results of a meta-analysis becomes questionable, and the overall mean effect size can be exaggerated (Shi & Lin, 2019). For example, in the case of antidepressant trials, Turner et al. (2008) found a total of 74 studies that were registered with the US Food and Drug Administration (FDA); 23 of them were not published. Overall, compared to those in the FDA, the impact sizes in the published studies increased by 32%. For this meta-analysis, the trim and fill method suggested adding 42 studies (or effect sizes) to the right of the overall mean effect size (0.589), and the adjusted mean would

be 0.627, which is higher than the computed mean effect size. In other words, the program was saying that with 251 effect sizes, the mean effect size could be higher than this. Therefore, the overall effect size of 0.589 is indeed underestimated as a result of the sample effect by publication bias. That is, no manipulation was made to include only significant results, but also insignificant ones and/or those with small correlation coefficients and small samples. The basic aim of the inclusion of unpublished theses and dissertations into the meta-analysis was to reduce the risk of publication bias. On the other hand, as there are several methods to explore potential publication bias, controversial results were evident, and it can be confidently concluded that this meta-analysis is not almost free from publication bias.

Small variance for the mean effect size and higher heterogeneity among studies are two of the essential conditions for a valid meta-analysis (Borenstein et al., 2009). The confidence interval for the main meta-analysis (the first research question) was computed as 95% [0.622-0.692], which indicates the existence of a small variance for the mean effect size. The prediction interval was found as 95% [0.120-0.831], meaning that a wider prediction interval indicates the heterogeneity of the studies included.

5.3. Discussion of the Key Individual Psychological Resources

Among seven key individual psychological resources, the highest effect size was calculated for a sense of coherence (.676), then for self-esteem (.643), resilience (.587), hope (.559), self-efficacy (.540), optimism (.530), and self-control (.431) respectively. According to Cohen's criteria, all these effect sizes refer to a large association with psychological well-being. Some extensive projects aimed to create a benchmark for average effect sizes in social and personality psychology literature. For example, Gignac and Szodorai (2016) reviewed 708 meta-analytically derived correlations, and they found that the average effect size was .190. Upon this finding, the authors suggested recasting Cohen's guidelines in this light, such that correlations of .10, .20, and .30 could be considered small, typical, and relatively large, respectively (p. 74) for psychology discipline. Moreover, Funder and Ozer (2019) proposed the criteria that the r should be interpreted as small (0.1), medium (0.2), large (0.3), or very large (0.4) level of average effect size. Compared to the authors' finding and recommendations, the magnitude of effect sizes about all seven key individual

psychological resources can be deemed as large or very large. The same conclusion can be made for the overall effect (0.589) size between seven composite key individual psychological resources and psychological well-being in people aged above 18+.

The same moderators were tested with a subgroup basis that is separately on key individual psychological resources. Year of publication, age group, version of PWB Scales, and frequency of the usage of the scales used to assess resources did not moderate the relationship between any key individual psychological resources and psychological well-being. The mean effect size between a sense of coherence and psychological well-being was moderated by sample size ($z = -5.29, p < .05$). In other words, there was significant heterogeneity among effect sizes in relation to the sample size of the studies. The mean effect size in studies with large sample sizes was 0.0016 lower than the ones with lower sample sizes. There are 13 effect sizes generated from 10 main studies. All of the sample sizes are lower than the average sample size of the main group. Small sample sizes might inflate the effect sizes because in that situation the standard deviation will be more unstable (Lakens, 2022). Moreover, the country of origin of the participants significantly moderated the relationship between the sense of coherence and psychological well-being. The mean effect size of the studies with participants from Western countries was higher than the ones from Eastern countries. This moderation effect might be artificial because there is a huge difference between the groups (Western countries= 10 effect sizes, Eastern countries= 3 effect sizes).

Concerning Hofstede's cultural values, the significant moderators were as follows; the relationships between hope, sense of coherence, and psychological well-being were moderated by indulgence, the relationships between optimism, self-control, sense of coherence and psychological well-being were moderated by individualism, the relationship between sense of coherence and psychological well-being was moderated by long term orientation.

To begin with, the moderating role of indulgence between hope and psychological well-being, the results showed that the mean effect size between the two decreased about 0.0060 as one unit increase in indulgence level. Hofstede conceptualized the cultural value of indulgence as the extent to which people of a society tend to control or pursue their desires and impulses. Hofstede (2011) stated

that the polar opposite of indulgent societies is the restrained ones, where there are strict rules and social norms, tight control over one's desire for fun and enjoyment in life, and delay and/or suppression of gratification. Snyder et al. (1991) described hope with two dimensions agency and pathways; denoting a sense of efficacy and achievement of desired goals. If indulgence is interpreted as lose control over one's desires and impulses, then this might undermine hope in the sense that people may experience less achievement in personal agency and goal attainment. Meanwhile, the dimensions of indulgence and long-term orientation showed negative correlation (Hofstede et al., 2010), because societies that are more indulgent are more prone to be lack of support for thrift as a desirable trait. However, Hofstede et al. (2010) also added that indulgence as a cultural value includes enjoying life by spending money, and engaging in leisure and fun-related activities with friends, family members, and alone. As such, it would be expected to find indulgence as a significant moderator not decreasing but increasing the mean effect size between hope and psychological well-being. People fueled with enjoyment and fun by either themselves or their loved ones and more leisure time could be more motivated towards agency and action in line with their goals. The Pew Research Center, collecting data from fifty countries asked respondents how optimistic they are about the future, and Hofstede found that optimism and indulgence were positively correlated (Hofstede, 2001). Hope and optimism are different constructs, but they have similar aspects, too. Nevertheless, extreme levels of indulgence may keep people from the personal agency and action if the matter is to the extent of hedonism-oriented life. More elaboration is needed with more theoretical and empirical knowledge on this result. Furthermore, although the moderating effect was significant, the decrease in mean effect size was almost trivial.

The other relationship that indulgence significantly moderated was between sense of coherence and psychological well-being. The mean effect size between the two increased by about 0.003 as one unit increase in indulgence level. Hofstede et al. (2010) compares indulgent versus restrained societies in a detailed way. They stated that people in indulgent societies have more perception of personal life control, more positive attitudes towards life's circumstances, and put much importance to relational and leisure resources. Based on these explanations, manageability and meaningfulness dimensions of a sense of coherence seem to be quite related to indulgence. If the

cultural value of indulgence is rephrased as “knowing how to enjoy life”, then it is quite understandable that people with a sense of coherence will take what they can from life for their well-being. People with higher SOC are also dedicated to maintaining and developing their health by using their resistance resources (friendships, leisure time, etc.).

Individualism positively moderated the relationship between a sense of coherence and psychological well-being. Hofstede et al. (2010) elaborated on collectivist societies in detail and mentioned that in-group or we-group is the ultimate source of one’s identity and the only source of protection from the hardships of life. However, the Western conceptualization of a sense of coherence seems to put much more importance on personal agency, control over conditions, and the strong belief to move on life in cases of difficulties, not only by alone but also by asking for help from others if necessary. Therefore, sense of coherence puts much emphasis on the individual, rather than the group, and seems to serve to interests of the individual than to the group. Moreover, Hofstede et al. (2010) found that IBM workers from individualistic countries gave more importance to have challenging work to do than those from collectivist countries. As part of the people’s characteristics with higher levels of sense of coherence to see difficulties as “welcomed challenges” and derive a sense of meaning from them, this finding supports the moderating effect of individualism. There are very few empirical findings concerning this finding. Moons et al. (2021) investigated the sense of coherence in adults with congenital heart disease in 15 countries, and they included Hofstede’s six cultural dimensions as well for comparison among the countries. The countries were quite diverse in terms of cultural values. The results showed that participants in more individualistic societies reported higher levels of sense of coherence. Although the moderating effect of individualism is quite weak, it worth to explore this finding with more future studies.

The other relationship that individualism negatively moderated was the one between self-control and psychological well-being. Empirical findings are supporting this finding. For example, Li et al., (2018) compared Chinese and U.S. (typical examples for the two poles- collectivist and individualist countries) undergraduates on their level of behavioral self-control and found that Chinese students had higher behavioral self-control than U.S. students did. Moreover, interdependent self-

construal, which is a related concept with collectivistic cultures, was found to be significantly and positively related to self-control across various decision contexts (Steinmetz & Mussweiler, 2017). Hofstede et al. (2010) discussed that in individualistic societies, speaking one's mind is a virtue, but it is vice versa in collectivistic societies. If self-control would connote controlling your feelings, thoughts, and behaviors in alignment with normative expectations in the society, then this finding of the current meta-analysis would be so meaningful. However, self-control as a key individual psychological resource is conceptualized as an active self that chooses long-term goals over short-term ones, and the capacity to block unwanted impulses and behaviors effortfully. The moderating effect of self-control might have come from intrinsic versus extrinsic control types. Given the fact that there were main studies in this meta-analysis, which assessed self-control with the Rotter's Locus of Control Scale. That being the case, people in individualistic societies are expected to be more autonomous and on their own (Hofstede et al., 2010)-they are responsible for their own successes and failures, which may foster intrinsic control.

Optimism and psychological well-being were positively moderated by individualism. Fischer and Chalmers' meta-analysis (2008) with 213 studies from 22 nations showed that greater individualism was associated with greater optimism, but the mean effect size was small. For the current meta-analysis, the moderating effect of individualism was also quite small (0.004 increase in mean effect size for each unit increase in individualism). Recently, Keating and Melis (2021) investigated youth attitudes towards their future in the context of optimism as a resource and individualism in the UK and found that young adults are more optimistic about their future if they have higher levels of agency and/or individualism. In more individualistic societies, personal agency and a strong emphasis on free will might encourage people to exert influence over the future, the belief in positive change with personal effort. However, in more collectivistic societies, personal initiative is kept in the background for the profits and welfare of the group(s) people are identified with. This embeddedness enclosed with social norms and traditions and consolidated from generation to generation might discourage people from imagining a better future.

The last significant and positive moderation was by long-term orientation in the relationship between a sense of coherence and psychological well-being. Long-

term orientation stands for perseverance, preparation for the future, delays in short-term gratifications for long-term ones, and focus on the future rather than the past. Feeling “coherent” means having clarity, having the quality of holding together, etc. Moreover, SOC as the belief that life is comprehensible, manageable, and meaningful might motivate people to invest in the future, to dedicate (relationships, career goals, family, etc.), and to be open to change for a better and meaningful life.

5.4. Implications for Practice

- 1) This meta-analysis adopting a strength-based approach may promote the development and implementation of prevention and intervention studies that aim to support key psychological resources of the participants.
- 2) For counseling practice in schools and universities, a strength-based approach can be adopted for both students’ and employees’ psychological well-being.
- 3) The findings can benefit the authorities of companies who are responsible for creating a better working environment and performance by focusing on how to increase the employees’ key individual psychological resources.
- 4) For counseling and psychotherapy practice, mental health counselors should explore and draw attention to the key individual psychological resources of their clients to promote their psychological well-being. During the counseling or therapy process, they should explore the client’s resources available. They may try to learn the client’s past achievements and coping resources to enable the client to remember those and reevaluate the present and the future from a more optimistic perspective.
- 5) Psychological well-being units can be established in institutions that design programs, events, regulations, workshops, meetings with decision-makers, needs assessment, etc. in a way that will increase self-efficacy, self-esteem, resilience, hope, optimism, sense of coherence, and self-control of their members. Examples of prevention and intervention programs were mentioned in Appendix G.

Additionally, several issues about reporting quality might be highlighted for researchers to make the primary studies serve better in cumulative analyses based on

the difficulties the researcher had while completing this meta-analysis. These are as follows:

- 1) First and foremost, the correlation table for study variables should be reported in detail.
- 2) In addition to correlation coefficients between subscales of study variables, correlation coefficients with composite scores should be reported as well.
- 3) The demographic characteristics of the participants should be given in detail (mean age, age range, gender distribution, education levels, etc.)
- 4) Data collection time should be reported.
- 5) Country or country information regarding where the participants were recruited should be reported.

5.5. Recommendations for Further Research

Drawn from the conclusions of this meta-analysis, several implications for research can be inferred and summarized as follows:

- 1) The studies in this meta-analysis are limited to adult populations because assessment tools for both key individual psychological resources and psychological well-being are limited for children and adolescents. To get an idea about these populations on the same topic, reliable and valid assessment tools need to be developed.
- 2) The samples of the studies consisted mostly of university students and young adults. Future studies should recruit samples from other populations as well like elderly people, middle-aged adults, and those aged over 30.
- 3) Although some samples include different characteristics like those with health problems, mothers of children with serious diseases, athletes, and COVID-19 survivors, nearly any sample exists from minority groups of any kind, people with several disabilities, and disadvantaged populations (poverty, low socioeconomic status, etc.). Future studies should focus on these ignored or neglected groups as well.
- 4) Regarding gender distribution in the studies, the participation of males should be encouraged to balance the distribution.

- 5) The binary approach regarding the gender identity of the participants should be avoided, and the demographic questionnaires should be designed in a way that represents various gender identities like queer, gender fluid, transgender, non-binary, pangender, agender, etc.
- 6) The representation of the country of origin is not balanced. To have a broader and more accurate picture, studies from Africa, South America, and Australia are needed in the future.
- 7) Although the sense of coherence has the largest effect size in association with psychological well-being, it is the least studied construct as well. Therefore, future studies should focus more on the sense of coherence to expand the current knowledge concerning psychological well-being.
- 8) Out of 170 main studies, 112 of them used original versions of the PWB Scales. In terms of consistency, this might be evaluated as an advantage but PWB Scales are constructed mostly with the Western paradigm of psychological well-being. Hence, adapting an instrument should go beyond psychometric adaptation but cultural nuances should never be disregarded. Items should be revised adopting a culturally sensitive approach. The same situation holds for instruments used to assess key individual psychological resources. Out of 170 primary studies, 116 of them used well-known or benchmark scales to assess key individual psychological resources.
- 9) Future studies should explore the role of key individual psychological resources on psychological well-being with participants going through transitional periods and unexpected challenges (e.g., developmental crises, natural disasters, pandemics, moving to another place, entering a new career or a new job, leaving the nest for several reasons like education, marriage, etc.).
- 10) Other individual psychological resources like self-compassion, religiosity, gratitude, and wisdom should also be explored in their relation to psychological well-being by using meta-analytic techniques. These resources are currently and frequently cited in their relationships with psychological well-being.

REFERENCES

- Abhyankar, S. (2016). *PsyPositive, a positive psychology questionnaire: Construction and psychometric assessment*. [Unpublished minor research report]. S.P. Pune University.
- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment*, 18, 67–87. <https://doi.org/110.1177/1073191110382845>
- *Agarwal, N., & Malhotra, M. (2019). Relationship between optimism, resilience, and psychological well-being in young adults. *International Journal of Social Science and Economic Research*, 4(9), 6141-6148. <https://doi.org/10.1016/j.sbspro.2011.10.299>
- *Ahmadi, M. S., & Ramazani, A. (2020). Relationship between hope and psychological well-being among male and female students of Farhangian University of Zanjan Province. *Independent Journal of Management & Production*, 11(6), 2066-2079. <https://doi.org/10.14807/ijmp.v11i6.1122>
- *Akfirat, O. N. (2020). Investigation of relationship between psychological well-being, self-esteem, perceived general self-efficacy, level of hope and cognitive emotion regulation strategies. *European Journal of Education Studies*, 7(9), 286-306. <https://doi.org/10.46827/ejes.v7i9.3267>
- Alarcon, G. M., Bowling, N. A., & Khazon, S. (2013). Great expectations: A meta-analytic examination of optimism and hope. *Personality and Individual Differences*, 54(7). <https://doi.org/10.1016/j.paid.2012.12.004>
- *Alfred, G. C., Hammer, J. H., & Good, G. (2014). Male student veterans: Hardiness, psychological well-being, and masculine norms. *Psychology of Men & Masculinity*, 15, 95-99. <https://doi.org/10.1037/a0031450>
- Allport, G. W. (1961). *Pattern and growth in personality*. Holt, Reinhart & Winston.

*Altıntaş, D. (2019). *An analysis work on the relations among psychological resilience, forgiveness and psychological well-being in relation to being exposed to violence*. (Publication No. 603763) [Unpublished master's thesis, Ufuk University]. Council of Higher Education Thesis Center.

American Psychological Association. (1999). Archival description of counseling psychology. *The Counseling Psychologist*, 27, 589-592. <https://doi.org/10.1177/0011000099274006>

*Amin, N., & Shah, S. A. (2020). Psychological capital as predictor of psychological well-being among doctors. *Indian Journal of Positive Psychology Review*, 11(4), 389-391.

Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality. *Psychological Bulletin*, 146(4), 279-323. <https://dx.doi.org/10.1037/bul0000226>

*Anjum, R. (2022). Role of hardiness and social support in psychological well-being among university students. *MIER Journal of Educational Studies & Practices*, 12(1), 89-102. <https://doi.org/10.52634/mier/2022/v12/i1/2172>

Antonovsky, A. (1979). *Health, stress, and coping*. Jossey-Bass.

Antonovsky, A. (1992). Can attitudes contribute to health? *Advances*, 8(4), 33-49.

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36(6), 725-733. [https://doi.org/10.1016/0277-9536\(93\)90033-Z](https://doi.org/10.1016/0277-9536(93)90033-Z)

Antonovsky, A., (1987). *Unravelling the mystery of health: How people manage stress and stay well*. Jossey-Buss Publishers.

*Archana, U. P., & Singh, R. (2014). Resilience and spirituality as predictors of psychological well-being among university students. *Journal of Psychosocial Research*, 9(2), 227-235.

Aristotle. 1894. *Ethica Nicomachea*. Clarendon Press.

- Arnetz, B. B., Nevedal, D. C., Lumley, M. A., Backman, L., & Lublin, A. (2009). Trauma resilience training for police: Psychophysiological and performance effects. *Journal of Police and Criminal Psychology*, 24, 1–9. <https://doi.org/10.1007/s11896-008-9030-y>
- Arrindell, W. A., Wensink, J., Rosenberg, E., Van Twillert, B., Stedema, J., Meijer, D., & Hatzichristou, C. (1997). Dimensions of national culture as predictors of cross-national differences in subjective well-being. *Personality and Individual Differences*, 23(1), 37–53. [https://doi.org/10.1016/S0191-8869\(97\)00023-8](https://doi.org/10.1016/S0191-8869(97)00023-8)
- *Arya, B., & Lal, D. S. (2018). Grit and sense of coherence as predictors of well-being. *Indian Journal of Positive Psychology*, 9(1), 169-172. <https://doi.org/10.15614/ijpp.v9i01.11766>
- Assink, M., & Wibbelink, C. J. M. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology*, 12(3), 154–174. <https://doi.org/10.20982/tqmp.12.3.p154>
- *Au, A., Caltabiano, N. J., & Vaksman, O. (2023). The impact of sense of belonging, resilience, time management skills and academic performance on psychological well-being among university students. *Cogent Education*, 10(1). <https://doi.org/10.1080/2331186X.2023.2215594>
- Auty, K. M., Cope, A., & Liebling, A. (2017). A Systematic review and meta-analysis of yoga and mindfulness meditation in prison: Effects on psychological well-being and behavioural functioning. *International Journal of Offender Therapy and Comparative Criminology*, 61(6), 689–710. <https://doi.org/10.1177/0306624X15602514>
- *Awan, S., & Sitwat, A. (2014). Workplace spirituality, self-esteem, and psychological well-being among mental health professionals. *Pakistan Journal of Psychological Research*, 29(1), 125-149.
- *Ayesha, T., Akbar, W., & Shaikh, S. (2020). Mediating role of emotional stability and self-esteem between mindfulness and psychological well-being. *International Journal of Psychosocial Rehabilitation*, 24(1), 5161-5174. <https://doi.org/10.37200/V24I1/29996>
- Baessler, J., & Schwarzer, R. (1996). Measuring optimistic self-beliefs: A Spanish adaptation of the General Self-Efficacy Scale. *Ansiedad y Estrés*, 2(1), 1-8.

- *Balcan, A. (2023). The mediating role of social support in the relationship between operational stress and well-being in military personnel. *Broad Research in Artificial Intelligence and Neuroscience*, 14(1), 105-116. <https://doi.org/10.18662/brain/14.1/409>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1992). Exercise of personal agency through the self-efficacy mechanism. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 3-38). Hemisphere.
- Bandura, A. (Ed.) (1995). *Self-efficacy in changing societies*. Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9-44. <https://doi.org/10.1177/0149206311410606>
- *Banerjee, A., Sheth, H., Agarwall, A., & Chakraborty, A. (2022). Relationship between Covid-19 anxiety, locus of control, and psychological well-being. *Indian Journal of Health and Well-Being*, 13(2), 218-223.
- Banerjee, P., Yadav, S., & Puri, A. (2016). Construction of a test on optimism index: Peroma™ Perspective. *Journal of Psychology & Clinical Psychiatry*, 5(6), 00310. <https://doi.org/10.15406/jpcpy.2016.05.00312>
- Barbaranelli, C., & Capanna, C. (2001). Personal and collective efficacy in social-assistance volunteer organizations. In G. V. Caprara (Ed.), *The assessment of self-efficacy* (pp. 147-156). Edizioni Erickson.
- Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, 14, 413–445.

- Bartone, P. T. (1995). *A short hardiness scale*. American Psychological Society Annual Convention.
- Bartone, P. T. (2006). Resilience under military operational stress: Can leaders influence hardiness? *Military Psychology*, 18(1), 131-148. https://doi.org/10.1207/s15327876mp1803s_10
- Bartone, P. T. (1991, June). *Development and validation of a short hardiness measure* [Paper presentation]. Third Annual Convention of the American Psychological Society, Washington, DC, United States. <http://www.hardiness-resilience.com/docs/aps91b.pdf>
- Basabe, N., Paez, D., Valencia, J., Gonzalez, J. L., Rimé, B., & Diener, E. (2002). Cultural dimensions, socioeconomic development, climate, and emotional hedonic level. *Cognition & Emotion*, 16(1), 103–125. <https://doi.org/10.1080/02699930143000158>
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74, 1252–1265. <https://doi.org/10.1037/0022-3514.74.5.1252>
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4(1), 1-44.
- Beck, A.T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology*, 42(6), 861-865.
- Becker, B. J. (2005). Failsafe *N* or file-drawer number. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 111-125). Wiley. <http://dx.doi.org/10.1002/0470870168>
- Begg, C. B., & Mazumdar, M. (1994). Operating characteristics of a rank correlation test for publication bias. *Biometrics*, 50(4), 1088–1101.
- *Beltrán-Morillas, A. M., Sánchez-Hernández, M. D., Herrera, M. C., Villanueva-Moya, L., & Expósito, F. (2023). Self-efficacy and well-being in professionals working in intimate partner violence: Recovery experiences and

burnout as associated variables. *Psychological Reports*, 0(0), 1-27. <https://doi.org/10.1177/00332941231183331>

Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up of Alameda County residents. *American Journal of Epidemiology*, 109, 186–204.

*Bevvino, D. L. (1999). *Divorce adjustment as a function of gender, education level, personality, length of separation, disentanglement, initiator status and meaning*. (Publication No. 9955140) [Unpublished doctoral dissertation, Lehigh University]. ProQuest Dissertations and Theses Global.

*Beydoğan-Tangör, B., & Curun, F. (2016). Individual differences as predictors of psychological well-being: Authenticity, self-esteem and trait-anxiety. *Journal of Research in Education and Training*, 5(4), 1-13.

*Biaassoni, F., Salducco, A., & Abati, D. (2022). The COVID-19 “first lockdown” experience in Italy: The role of hope and optimism and their impact on psychological well-being and risk perception. *European Journal of Mental Health*, 17(2), 89-103. <https://doi.org/10.5708/EJMH.17.2022.2.10>

*Biclar, J. E. D. P., Tan-Mansukhani, R., & Simon, P. D. (2022). Self-efficacy and psychological well-being of family caregivers of persons with spinal cord injury. *Psychological Studies*, 67(3), 401-410. <https://doi.org/10.1007/s12646-022-00659-6>

*Blankenship, C. B. (1998). *The relationships among psychological well-being, personal independence, physical autonomy, and depression for retired independently living persons 65 and older*. (Publication No. 9835411) [Unpublished doctoral dissertation, Kent State University]. ProQuest Dissertations and Theses Global.

Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70(2), 349. <https://doi/10.1037/0022-3514.70.2.349>

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59(1), 20–28. <https://doi.org/10.1037/0003-066X.59.1.20>

- Bonanno, G. A., Romero, S. A., & Klein, S. I. (2015). The temporal elements of psychological resilience: An integrative framework for the study of individuals, families, and communities. *Psychological Inquiry*, 26(2), 139–169. <https://doi.org/10.1080/1047840X.2015.992677>
- Bond, F. W., & Bunce, D. (2000). Mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of Occupational Health Psychology*, 5, 156–163. <https://doi.org/10.1037//1076-8998.5.1.156>
- Borenstein, M. (2005). Software for publication bias. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 193-220). Wiley. <http://dx.doi.org/10.1002/0470870168>
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Wiley.
- Borges-Cosic, M., Gallo, F. J., Andrade, A., Camiletti-Moirón, D., Segura-Jiménez, V., Ruiz-Cabello, P. R., et al. (2015). Effects of an exercise intervention on health-related quality of life and optimism in middle aged women: The FLAMENCO Project. *Revista Andaluza de Medicina del Deporte*, 8(1). <https://dx.doi.org/10.1016/j.ramd.2014.10.007>
- Borras, L., Boucherie, M., Mohr, S., Lecomte, T., Perroud, N., & Huguelet, P. (2009). Increasing self-esteem: Efficacy of a group intervention for individuals with severe mental disorders. *European Psychiatry*, 24(5), 307-316. <https://doi.org/10.1016/j.eurpsy.2009.01.003>
- *Bowlins, S. L., & Baer, R. A. (2012). Relationships between mindfulness, self-control, and psychological functioning. *Personality and Individual Differences*, 52(3), 411-415. <https://doi.org/10.1016/j.paid.2011.10.050>
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Aldine.
- *Brooks, N. (2020). *The effects of childhood trauma on locus of control: Overall well-being*. (Publication No. 28258388) [Unpublished master's thesis, Barry University]. ProQuest Dissertations and Theses Global.

- Bruhns, A., Lüdtkke, T., Moritz, S., & Bückner L. (2021). A mobile-based intervention to increase self-esteem in students with depressive symptoms: Randomized controlled trial. *JMIR mHealth and uHealth*, 9(7). <https://doi.org/10.2196/26498>
- Bryant, F. B., & Cvengros, J. A. (2004). Distinguishing hope and optimism: Two sides of a coin, or two separate coins? *Journal of Social and Clinical Psychology*, 23(2), 273-302. <https://psycnet.apa.org/doi/10.1521/jscp.23.2.273.31018>
- Buckley, J. (2016). Exercise self-efficacy intervention in overweight and obese women. *Journal of Health Psychology*, 21(6), 1074-1084. <https://doi.org/10.1177/1359105314545096>
- Budiarto, Y., & Helmi, A. F. (2021). Shame and Self-Esteem: A Meta-Analysis. *Europe's Journal of Psychology*, 17(2), 131–145. <https://doi.org/10.5964/ejop.2115>
- Burns, D. (1997). *David Burns' Toolkit for Practitioners*. Feeling Good Institute.
- Burns, R. A., & Machin, M. A. (2009). Investigating the structural validity of Ryff's psychological well-being scales across two samples. *Social Indicators Research*, 93, 359-375. <https://doi.org/10.1007/s11205-008-9329-1>
- Cabanas, E. (2018). Positive psychology and the legitimization of individualism. *Theory & Psychology*, 28(1), 3-19. <https://doi.org/10.1177/0959354317747988>
- Cacioppo, J. T., & Berntson G. G. (1999). The affect system: architecture and operating characteristics. *Current Directions in Psychological Science*, 8, 133–37. <https://doi.org/10.1111%2F1467-8721.00031>
- *Calvo, V., D'Aquila, C., Rocco, D., & Carraro, E. (2022). Attachment and well-being: Mediatory roles of mindfulness, psychological inflexibility, and resilience. *Current Psychology*, 41(5), 2966-2979. <https://doi.org/10.1007/s12144-020-00820-2>
- Caplan, G. (1964). *Principles of preventative psychiatry*. Basic Books.
- Caplan, G. (1974). *Support systems and community mental health*. Behavioral Publications.

- *Carol, M. L. (2007). *Well-being, spirituality, and hope as predictors of parenting sense of competence in mothers of children with autism*. (Publication No. 3272835) [Unpublished doctoral dissertation, Fordham University]. ProQuest Dissertations and Theses Global.
- *Carotta, C. L., Lavender-Stott, E. S., Garcia, A. S., & Liu, H. (2022). Relationship status and well-being in the context of the COVID-19 pandemic. *Journal of Family Issues*, 192513. <https://doi.org/10.1177/0192513X221105242>
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control theory approach to human behavior*. Springer-Verlag.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. Cambridge University Press.
- Carver, C. S., & Scheier, M. F. (1999). Optimism. In C. R. Snyder (Ed.), *Coping. The psychology of what works* (pp. 182–204). Oxford University Press.
- Carver, C., & Scheier, M. F. (2002). Optimism. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 231–243). Oxford University Press.
- Carver, C. S., Scheier, M. F., & Segerstorm, S. C. (2010). Optimism. *Clinical Psychology Review*, 30(7), 879-889. <https://doi.org/10.1016/j.cpr.2010.01.006>
- Carver, C. S., & Scheier, M. F. (2024). Optimism. In F. Maggino (Ed.), *Encyclopedia of quality of life and well-being research*, 4849-4854. Springer.
- *Cedres, D. M. (2020). *Self-objectification, body shame, body image, self-esteem and psychological well-being among Latina women*. (Publication No. 28260535) [Unpublished doctoral dissertation, Alliant International University]. ProQuest Dissertations and Theses Global.
- *Cenkseven, F. (2004). *Examining the predictors of subjective and psychological well-being of university students*. (Publication No. 145956) [Unpublished doctoral dissertation, Çukurova University]. Council of Higher Education Thesis Center.

- *Cesar, S. (2014). *An examination of religious coping, spiritual coping, optimism, and psychological well-being as mediators of posttraumatic growth*. (Publication No. 3621309) [Unpublished doctoral dissertation, Walden University]. ProQuest Dissertations and Theses Global.
- *Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4(1), 62–83. <https://doi.org/10.1177/109442810141004>.
- *Chen, Y., Hua, K., Huang, C., Zhou, G., & Wang, J. (2021). Adverse childhood experiences and psychological well-being in Chinese college students: Moderated mediation by gender and resilience. *Frontiers in Psychiatry*, 12, 710635–710635. <https://doi.org/10.3389/fpsy.2021.710635>
- Chesney, M. A., Chambers, D. B., Taylor, J. M., Johnson, L. M., & Folkman, S. (2003). Coping effectiveness training for men living with HIV: Results from a randomized clinical trial testing a group-based intervention. *Psychosomatic Medicine*, 65(6), 1038–1046. <https://doi.org/10.1097/01.PSY.0000097344.78697.ED>
- Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods*, 19(2), 211–229. <https://doi.org/10.1037/a0032968>
- *Chiracu, A., Cosma, G. A., Stepan, A. R., Cosma, M. A., Corlaci, I., Călugăru, E. D. C., Voinea, F., Zăvăleanu, M., Burileanu, H. A., & Avramescu, T. (2023). Psychological capital, quality of life, and well-being in mother caregivers of individuals with Down syndrome. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1145104>
- Chmitorz, A., Kunzler, A., Helmreich, I., Tüscher, O., Kalisch, R., Kubiak, T., Wessa, M., & Lieb, K. (2018). Intervention studies to foster resilience - A systematic review and proposal for a resilience framework in future intervention studies. *Clinical Psychology Review*, 59, 78–100. <https://doi.org/10.1016/j.cpr.2017.11.002>
- *Choi, S. (2009). *The effects of fatherhood experiences on men's psychological well-being*. (Publication No. 3400023) [Unpublished doctoral dissertation, The University of Wisconsin-Medison]. ProQuest Dissertations and Theses Global.

- Christopher, J. C. (1999). Situating psychological well-being: Exploring the cultural roots of its theory and research. *Journal of Counseling & Development*, 77(2), 141-152. <https://doi/10.1002/j.1556-6676.1999.tb02434.x>
- Cieslak, R., Benight, C. C., Rogala, A., Smoktunowicz, E., Kowalska, M., Zukowska, K., Yeager, C., & Luszczynska, A. (2016). Effects of internet-based self-efficacy intervention on secondary traumatic stress and secondary posttraumatic growth among health and human services professionals exposed to indirect trauma. *Frontiers in Psychology*, 4(7). <https://doi/10.3389/fpsyg.2016.01009>
- Cigrang, J. A., Todd, S. L., & Carbone, E. G. (2000). Stress management training for military trainees returned to duty after a mental health evaluation: effect on graduation rates. *Journal of Occupational Health Psychology*, 5, 48–55. <https://doi.org/10.1037/1076-8998.5.1.48>
- Clarke, J., & Nicholson, J. (2010). *Resilience: bounce back from whatever life throws at you*. Hachette UK.
- *Clifford-Alfred, G. (2011). *Masculinity, hardiness, and psychological well-being in male student veterans*. (Publication No. 3515801) [Unpublished doctoral dissertation, University of Missouri]. ProQuest Dissertations and Theses Global.
- *Cobner, R. (1999). *Psychological factors influencing adherence to iron chelation therapy in patients with thalassemia*. (Publication No. 10608880) [Unpublished doctoral dissertation, University of London] ProQuest Dissertations and Theses Global.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates, Inc.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- *Cole, B. P. (2013). *An exploration of men's attitude regarding depression and help seeking*. (Publication No. 3558850) [Unpublished doctoral dissertation, The University of Nebraska]. ProQuest Dissertations and Theses Global.

- Comprehensive Meta-Analysis Version 4. (2022). Borenstein, M., Hedges, L., Higgins, J., & Rothstein, H. *Biostat*, Englewood, New Jersey.
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, 18, 76-82. <https://doi.org/10.1002/da.10113>
- Cooper, H., & Hedges, L. V. (2009). Research synthesis as a scientific process. In H. Cooper, L. V. Hedges & J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (2nd ed., pp. 3-16). Russell Sage Foundation.
- *Cooper, H., Okamura, L., & McNeil, P. (1995). Situation and personality correlates of psychological well-being: Social activity and personal control. *Journal of Research in Personality*, 29(4), 395-417. <https://doi.org/10.1006/jrpe.1995.1023>
- Coopersmith S. (1967). *The antecedents of self-esteem*. San Francisco, CA: Freeman.
- Corrigan, J. A., & Schutte, N. S. (2023). The relationships between the hope dimensions of agency thinking and pathways thinking with depression and anxiety: A meta-analysis. *International Journal of Applied Positive Psychology*, 8(2), 211-255. <https://doi.org/10.1007/s41042-023-00099-1>
- *Crawford, D., & Kashubeck-West, S. (2023). Testing a mediational framework for sexual minority resilience. *Psychology of Sexual Orientation and Gender Diversity*. Advance online publication. <https://doi.org/10.1037/sgd0000635>
- Curtin, R., Presser, S., & Singer, E. (2000). The effects of response rate changes on the index of consumer sentiment. *Public Opinion Quarterly*, 64, 413-428. <https://doi.org/10.1086/318638>
- *Czyżowska, N., & Gurba, E. (2021). Does reflection on everyday events enhance meaning in life and well-being among emerging adults? Self-efficacy as mediator between meaning in life and well-being. *International Journal of Environmental Research and Public Health*, 18(18), 9714. <https://doi.org/10.3390/ijerph18189714>
- *Dagang, M. M., Ibrahim, R. Z. A. R., Saputra, J., Juraidi, N. F., Husain, Z., & Jaafar, W. M. W. (2022). An investigation of predictive factors of the orphanages' psychological well-being in Terengganu, Malaysia. *International Journal of*

- Dagenais-Desmarais, V., & Savoie, A. (2012). What is psychological well-being, really? A grassroots approach from the organizational sciences. *Journal of Happiness Studies*, 13, 659-684. <https://doi.org/10.1007/s10902-011-9285-3>
- Danna, K., & Griffin, R. W. (1999). Health and well-being in the workplace: A review and synthesis of the literature. *Journal of Management*, 25(3), 357–384. <https://doi.org/10.1177/014920639902500305>
- De Ridder, D. T., De Boer, B. J., Lugtig, P., Bakker, A. B., & Van Hooft, E. A. J. (2011). Not doing bad things is not equivalent to doing the right thing: Distinguishing between inhibitory and initiatory self-control. *Personality and Individual Differences*, 50, 1006–1011. <https://doi.org/10.1016/j.paid.2011.01.015>
- De Ridder, D. T., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review*, 16(1), 76-99. <https://doi.org/10.1177/1088868311418749>
- De Ridder, D., & Gillebaart, M. (2017). Lessons learned from trait self-control in well-being: making the case for routines and initiation as important components of trait self-control. *Health Psychology Review*, 11(1), 89-99. <https://doi.org/10.1080/17437199.2016.1266275>
- Deci, E. L., & Ryan, R. M. (2008). “Facilitating optimal motivation and psychological well-being across life’s domains”: Correction to Deci and Ryan (2008). *Canadian Psychology / Psychologie Canadienne*, 49(3), 262. <https://doi.org/10.1037/0708-5591.49.3.262>
- *Değirmenci, B. (2019). The role of optimism in optimizing the impact of psychological persistence of public workers on psychological well-being. *Journal of Turkish Social Sciences Research*, 4(1), 47-62.
- Dettori, J. R., Norvell, D. C., & Chapman, J. R. (2021). Seeing the forest by looking at the trees: How to interpret a meta-analysis forest plot. *Global Spine Journal*, 11(4), 614-616. <https://doi.org/10.1177/21925682211003889>

- *Deuskar, M., & Abhyankar, S. (2022). Does positivity predict well-being? *Indian Journal of Positive Psychology*, 13(2), 79-86.
- *Dhingra, K., & Lata, S. (2020). Optimism and spirituality in relation to psychological well-being among middle aged adults. *Indian Journal of Gerontology*, 34(1), 67-83.
- *Dinesh, T. K., Shetty, A., Gil, M. T., & D'souza, K. J. (2023). Effects of perceived stress, mindfulness, self-efficacy and social support on psychological wellbeing of life insurance agents during the COVID-19 pandemic. *Ekonomika Istraživanja*, 36(3), 1-25. <https://doi.org/10.1080/1331677X.2022.2154237>
- Díaz, D., Rodríguez-Carvajal, R., & Blanco, A. et al. (2006). Spanish adaptation of the Psychological Well-Being Scales (PWBS)]. *Psicothema*, 18(3), 572-577.
- Dickersin, K. (2005). Publication bias: Recognizing the problem, understanding its origins and scope, and preventing harm. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 11-34). Wiley. <http://dx.doi.org/10.1002/0470870168>
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- Diener, E., & Fujita, F. (1995). Resources, personal strivings, and subjective well-being. A nomothetic and idiographic approach. *Journal of Personality and Social Psychology*, 68(5), 926-935. <http://dx.doi.org/10.1037/0022-3514.68.5.926>
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276-302. <https://psycnet.apa.org/doi/10.1037/0033-2909.125.2.276>
- *Dionigi, A., Casu, G., & Gremigni, P. (2020). Associations of self-efficacy, optimism, and empathy with psychological health in healthcare volunteers. *International Journal of Environmental Research and Public Health*, 17(16), 6001. <https://doi.org/10.3390/ijerph17166001>
- *Diouf, F. (2021). *An international investigation of resilience, spirituality, and psychological well-being in Catholic priests, and religious women and men.*

(Publication No. 28492778) [Unpublished doctoral dissertation, College of Saint Elizabeth] ProQuest Dissertations and Theses Global.

- Dohrenwend, B. P. (1979). Stressful life events and psychopathology: Some issues of theory and method. In J. E. Barrett, R. M. Rose, & G. L. Klerman (Eds.), *Stress and mental disorder*. Raven Press.
- Donnellan, M. B., Trzesniewski, K. H., & Robins, R. W. (2011). Self-esteem: Enduring issues and controversies. In T. Chamorro-Premuzic, S. von Stumm, & A. Furnham (Eds.), *The Wiley-Blackwell handbook of individual differences* (pp. 718–746). Wiley-Blackwell.
- Dorsch, M. J, Törnblom, K. Y., & Kazemi, A. (2016). A review of resource theories and their implications for understanding consumer behavior. *Journal of the Association for Consumer Research*, (2), 1. <http://dx.doi.org/10.1086/688860>
- Duval, S. (2005). The trim and fill method. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 1-8). Wiley. <http://dx.doi.org/10.1002/0470870168>
- Duval, S. J. & Tweedie, R.L. (2000a). A non-parametric ‘trim and fill’ method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, 95, 89–98. <https://doi.org/10.1080/01621459.2000.10473905>
- Duval, S.J. & Tweedie, R. L. (2000b). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, 56, 455–463. <https://doi.org/10.1111/j.0006-341x.2000.00455.x>
- Egger, M., Davey Smith, G., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal*, 315, 629–634.
- *Eghbali, B., Saadat, S., Hasanzadeh, K., Pourramzani, A., Khatami, S., Saberi, A., & Jafroudi, M. (2022). Relationship between self-compassion and psychological well-being with the mediating role of resilience in people with multiple sclerosis. *Postępy Psychiatrii Neurologii*, 31(2), 43-51. <https://doi.org/10.5114/ppn.2022.117999>

- *Ekas, N. V., Lickenbrock, D. M., & Whitman, T. L. (2010). Optimism, social support, and well-being in mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 40(10), 1274-1284. <https://doi.org/10.1007/s10803-010-0986-y>
- *Ektaş, E. E. (2017). *Study of the relationship among resilience, self-compassion and psychological well-being for autistic children's mothers*. (Publication No. 495598) [Unpublished master's thesis, Maltepe University]. Council of Higher Education.
- *Elderkin, N. (2020). *Exploring the role of mindfulness on psychological well-being among college students*. (Publication No. 855) [Unpublished honors undergraduate thesis, University of Central Florida].
- *Elik-Besdil, G. (2020). *The conditional variable role of psychological well-being on the effect of psychological capital on job satisfaction*. (Publication No. 647046) [Unpublished master's thesis, Yıldız Technical University]. Council of Higher Education.
- *Elizabeth, K., George, A., & Prasannan, G. (2023). Dispositional optimism, psychological well-being and perceived social support among college teachers. *Indian Journal of Positive Psychology*, 14(1), 43-47.
- Erikson, E. (1959). Identity and the life cycle. *Psychological Issues*, 1, 18-164.
- *Eroğlu, İ. H. (2021). *The mediating role of emotional expression and self-esteem in the relationship between social problem solving and psychological well-being of nursing students*. (Publication No. 665941) [Unpublished master's thesis, Aydın Adnan Menders University]. Council of Higher Education.
- *Esen, E., Besdil, G.E., & Erkmen, T. (2021). Moderating role of psychological well-being on the relationship between psychological capital and job satisfaction. *Management Research and Practice*, 13, 26–40.
- *Eşkisü, M. (2021). The role of proactive personality in the relationship among parentification, psychological resilience and psychological well-being. *International Online Journal of Education and Teaching (IOJET)*, 8(2), 797-813.

- Färber, F., & Rosendahl, J. (2020). Trait resilience and mental health in older adults: A meta-analytic review. *Personality and Mental Health*, 14(4), 361-375. <https://doi.org/10.1002/pmh.1490>
- Farid, A., & Ashrafzade, T. (2020). A meta-analysis of the relationship between self-efficacy and academic performance. *Journal of Educational Sciences*, 27(2), 69-90. <https://doi.org/10.22055/edus.2020.35466.3130>
- Farrington, D. P., Ttofi, M. M., & Piquero, A. R. (2016). Risk, promotive, and protective factors in youth offending: Results from the Cambridge study in delinquent development. *Journal of Criminal Justice*, 45, 63–70. <https://doi.org/10.1016/j.jcrimjus.2016.02.014>
- Fischer, R., & Chalmers, A. (2008). Is optimism universal? A meta-analytical investigation of optimism levels across 22 nations. *Personality and Individual Differences*, 45(5), 378-382. <https://doi.org/10.1016/j.paid.2008.05.008>
- Fisher, R.A. (1932). *Statistical methods for research workers* (4th ed.). Oliver & Boyd.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992–1003. <https://doi.org/10.1037/0022-3514.50.5.992>
- Fowler, D. R., Weber, E. N., Klappa, S. P., & Miller, S. A. (2017). Replicating future orientation: Investigating the constructs of hope and optimism and their subscales through replication and expansion. *Personality and Individual Differences*, 116(1), 22–28. <https://doi.org/10.1016/j.paid.2017.04.010>
- Fraenkel, J., & Wallen, N. (1990). *How to design and evaluate research in education*. McGraw-Hill, Inc.
- Fraenkel, J., Wallen, N., & Hyun, H. (2018). *How to design and evaluate research in education* (8th ed.). McGraw-Hill Education.
- *Franz, C. E., Panizzon, M. S., Eaves, L. J., Thompson, W., Lyons, M. J., Jacobson, K. C., Tsuang, M., Glatt, S. J., & Kremen, W. S. (2012). Genetic and environmental multidimensionality of well- and ill-being in middle aged twin

men. *Behavior Genetics*, 42(4), 579-591. <https://doi.org/10.1007/s10519-012-9538-x>

Freeman, N., & Muraven, M. (2010). Self-control depletion leads to increased risk taking. *Social Psychological and Personality Science*, 1(2), 175-181. <https://doi.org/10.1177/1948550609360421>

*Freire, C., Ferradás, M. D. M., Núñez, J. C., Valle, A., & Vallejo, G. (2018). Eudaimonic well-being and coping with stress in university students: The Mediating/Moderating role of self-efficacy. *International Journal of Environmental Research and Public Health*, 16(1), 48. <https://doi.org/10.3390/ijerph16010048>

Fretz, B. R. (1985). Counseling psychology. In E. M. Altmaier & M. E. Meyer (Eds.), *Applied specialties in psychology* (pp. 45-73). Random House.

Friborg, O., Martinussen, M., & Rosenvinge, J. H. (2006). Likert-based vs. semantic differential-based scorings of positive psychological constructs: A psychometric comparison of two versions of a scale measuring resilience. *Personality and Individual Differences*, 40(5), 873-884. <https://doi.org/10.1016/j.paid.2005.08.015>

Funder, D. & Ozer, D. (2019). Evaluating effect size in psychological research: Sense and nonsense. *Advances in Methods and Practices in Psychological Science*, 3(4), 509–509. <https://doi.org/10.1177/2515245920979282>

Gallagher, M. W., Long, L. J., & Phillips, C. A. (2020). Hope, optimism, self-efficacy, and posttraumatic stress disorder: A meta-analytic review of the protective effects of positive expectancies. *Journal of Clinical Psychology*, 76(3), 329-355. <https://doi.org/10.1002/jclp.22882>

Gardner, B., Rose, J., Mason, O., Tyler, P., & Cushway, D. (2005). Cognitive therapy and behavioural coping in the management of work-related stress: An intervention study. *Work & Stress*, 19, 137–152. <https://doi.org/10.1080/02678370500157346>

*Gaskin, A. L. (2015). *The relationship between skin tone and psychological adjustment: Exploring the role of racial socialization*. (Publication No. 3719751) [Unpublished doctoral dissertation, The University of North Carolina at Chapel Hill]. ProQuest Dissertations and Theses Global.

Gavrilov-Jerković, V., Jovanović, V., Žuljević, D., & Brdarić, D. (2014). When less is more: A short version of the personal optimism scale and the self-efficacy optimism scale. *Journal of Happiness Studies*, 15, 455-474. <https://doi.org/10.1007/s10902-013-9432-0>

Gelso, C., & Fretz, B. (2001). *Counseling psychology* (2nd ed.). Harcourt.

*Gera, T., Bhardwaj, A., Singh, D., Boora, J., Lohra, N., Boora, S., Singh, S., & Sharma, T. (2022). Gratitude and hope as correlates of psychological well-being amongst COVID-19 survivors. *Indian Journal of Positive Psychology*, 13(4), 418-422.

Gert-Hofstede.com. Cultural dimension—national culture. Available at: <https://geerthofstede.com/> (2024, accessed June 2024).

Geyer, S. (1997). Some conceptual considerations on the sense of coherence. *Social Science & Medicine*, 44(12), 1771-1779. [https://doi.org/10.1016/S0277-9536\(96\)00286-9](https://doi.org/10.1016/S0277-9536(96)00286-9)

*Gibson, A., & Hicks, R. E. (2018). Psychological capital and core self-evaluations in the workplace: Impacts on well-being. *International Journal of Psychological Studies*, 10(2), 15- 24. <https://doi.org/10.5539/ijps.v10n2p15>

Gignac G. E., & Szodorai E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, 102, 74–78. <https://doi.org/10.1016/j.paid.2016.06.069>

González-Siles, P., Martí-Vilar, M., González-Sala, F., Merino-Soto, C., & Toledano-Toledano, F. (2022). Sense of coherence and work stress or well-being in care professionals: A systematic review. *Healthcare*, 10, 7. <https://doi.org/10.3390/healthcare10071347>

Gorgievski, M. J., Halbesleben, J. R. B, & Bakker, A. B. (2019). Expanding the boundaries of psychological resource theories. *Journal of Occupational and Organizational Psychology*, 84, 1-7. <http://doi.org/10.1111/j.2044-8325.2010.02015.x>

*Grabowska-Chenczke, O., Wajchman-Świtalska, S., & Woźniak, M. (2022). Psychological well-being and nature relatedness. *Forests*, 13(7), 1048. <https://doi.org/10.3390/f13071048>

- Gray, J. S., & Ozer, D. J., & Rosenthal, R. (2017). Goal-conflict and psychological well-being: A meta-analysis. *Journal of Research in Personality*, 66, 27-37. <http://dx.doi.org/10.1016/j.jrp.2016.12.003>
- *Green, Z. A. (2020). The mediating effect of well-being between generalized self-efficacy and vocational identity development. *International Journal for Educational and Vocational Guidance*, 20(2), 215-241. <https://doi.org/10.1007/s10775-019-09401-7>
- Grime, P. R. (2004). Computerized cognitive behavioural therapy at work: a randomized controlled trial in employees with recent stress-related absenteeism. *Occupational Medicine*, 54, 353-359. <https://doi.org/10.1093/occmed/kqh077>
- *Guan, T. C., Gloria, A. M., & Castellanos, J. (2020). Second-generation Chinese American female undergraduates: Psychosociocultural correlates of well-being. *Asian American Journal of Psychology*, 11(4), 246-258. <https://doi.org/10.1037/aap0000209>
- Gurevitch, J., Koricheva, J., Nakagawa, S., et al. (2018). Meta-analysis and the science of research synthesis. *Nature*, 555, 75-82. <https://doi.org/10.1038/nature25753>
- *Haghighyeghi, M., Mousavi, A., Moghadamzadeh, A., & Naji, S. H. (2023). Reduction in physical activity moderates the effect of perceived disturbance from the covid-19 pandemic on psychological well-being: A moderated-mediation approach. *The Humanistic Psychologist*. Advance online publication. <https://dx.doi.org/10.1037/hum0000329>
- Halbesleben, J. R. B., & Wheeler, A. R. (2015). To invest or not? The role of coworker support and trust in daily reciprocal gain spirals of helping behavior. *Journal of Management*, 41, 1628-50. <https://doi.org/10.1177/0149206312455246>
- Harris, S. J. (2001). *Religiosity and psychological well-being among older adults: A meta-analysis*. (Publication No. 3057612) [Unpublished doctoral dissertation, Carlos Albizu University]. ProQuest Dissertations and Theses Global.
- Harris, M. A., & Orth, U. (2020). The link between self-esteem and social relationships: A meta-analysis of longitudinal studies. *Journal of Personality*

and Social Psychology, 119(6), 1459–1477.
<https://doi.org/10.1037/pspp0000265>

*He, F. X., Turnbull, B., Kirshbaum, M. N., Phillips, B., & Klainin-Yobas, P. (2018). Assessing stress, protective factors and psychological well-being among undergraduate nursing students. *Nurse Education Today*, 68, 4-12.
<https://doi.org/10.1016/j.nedt.2018.05.013>.

Heatherton, T. F., & Polivy, J. (1991). State Self-Esteem Scale (SSES) [Database record]. *APA PsycTests*. <https://doi.org/10.1037/t01181-000>

Hébert, M., Daspe, M.-E., Lapierre, A., Godbout, N., Blais, M., Fernet, M. & Lavoie, F. (2017). A meta-analysis of risk and protective factors for dating violence victimization: The role of family and peer interpersonal context. *Trauma, Violence, & Abuse*, 20(4), 574–590.
<https://doi.org/10.1177/1524838017725336>

Helmreich, R. & Stapp, J. (1974): Short forms of the Texas Social Behavior Inventory: An objective measure of self-esteem. *Bulletin of the Psychonomic Society*, 4, 473-475. <https://doi.org/10.3758/BF03334260>

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2–3), 61–83.
<https://doi.org/10.1017/S0140525X0999152X>

Heo, J., Chun, S., Lee, S., & Kim, J. (2016). Life satisfaction and psychological well-being of older adults with cancer experience: The role of optimism and volunteering. *International Journal of Aging & Human Development*, 83(3), 274-289. <https://doi.org/10.1177/0091415016652406>

*Hernández-Varas, E., Labrador Encinas, F. J., & Méndez Suárez, M. (2019). Psychological capital, work satisfaction and health self-perception as predictors of psychological wellbeing in military personnel. *Psicothema*, 31(3), 277-283. <https://doi.org/10.7334/psicothema2019.22>.

Herth, K. (1991). Development and refinement of an instrument to measure hope. *Scholarly Inquiry for Nursing Practice*, 5, 39-51.

- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307–324. <http://doi.org/10.1037//1089-2680.6.4.307>
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Sage Publications.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software for the mind* (3rd Ed.). McGraw-Hill.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1). <https://doi.org/10.9707/2307-0919.1014>
- Hofstede Insights Cultural Compass Report, 2023. Studies included in this current study. <https://www.hofstede-insights.com/product/compare-countries/>
- Horrell, K. E., Elizabeth Lewis Hall, M., Anderson, T. L., & Lee, G. (2022). Gender role ideologies, marital satisfaction, and eudaimonic well-being in Evangelical women. *Journal of Psychology and Theology*, 50(3), 292–305. <https://doi.org/10.1177/00916471211011598>
- Houben, M., Van Den Noortgate, W., & Kuppens, P. (2015). The relation between short-term emotion dynamics and psychological well-being: A meta-analysis. *Psychological Bulletin*, 141(4), 901–930. <http://dx.doi.org/10.1037/a0038822>
- Hu, T., Zhang, D., & Wang, J. (2015). A meta-analysis of the trait resilience and mental health. *Personality and Individual Differences*, 76, 18–27. <https://doi.org/10.1016/j.paid.2014.11.039>
- Huang, C. (2017). Time spent on social network sites and psychological well-being: A meta-analysis. *Cyberpsychology, Behavior, and Social Networking*, 20(6), 346–354. <https://doi.org/10.1089/cyber.2016.0758>

- *Huang, S. (2017). *Psychological and academic entitlement: Psychosocial and cultural predictors and relationships with psychological well-being*. (Publication No. 7266) [Unpublished doctoral dissertation, University of Windsor]. Electronic Thesis and Dissertations.
- Humboldt, S., & Leal, I. (2013). The promotion of older adults' sense of coherence through Person-Centered Therapy: A randomized controlled pilot study. *Interdisciplinaria*, 30(2), 235-251.
<https://doi.org/10.16888/interd.2013.30.2.4>
- *Ionescu, D. (2014). Motivational persistence, optimism and neuroticism as dispositional determinants for self-concordance of goals and psychological well-being. *Analele Științifice ale Universității «Alexandru Ioan Cuza» Iași. Psihologie*, (2), 79-87.
- *Ishaq, G., Malik, N. I., & Asif, M. (2018). Relationship of loneliness and psychological well-being among university hostels students: Moderating role of self-esteem. *Journal of Research in Social Sciences*, 6(2), 242-255.
- Işık, Ş. (2016). Developing the Psychological Hardiness Scale: The validity and reliability study. *The Journal of Happiness & Well-Being*, 4(2), 165-182.
- *Itani, N. (2022). *Growing up in the United Arab Emirates: The cross-cultural identities of adult third culture kids*. (Publication No. 29993843) [Unpublished doctoral dissertation, Walden University]. ProQuest Dissertations and Theses Global.
- Jackson, T., Wang, Y., Wang, Y., & Fan, H. (2014). Self-efficacy and chronic pain outcomes: A meta-analytic review. *The Journal of Pain*, 15(8), 800-814.
<https://doi.org/10.1016/j.jpain.2014.05.002>
- Jahoda, M. (1958). *Current concepts of positive mental health*. Basic Books.
- Jeserich, F., Klein, C., Brinkhaus, B., & Teut, M. (2023). Sense of coherence and religion/spirituality: A systematic review and meta-analysis based on a methodical classification of instruments measuring religion/spirituality. *PLoS One*, 18(8), e0289203.
<https://doi.org/10.1371/journal.pone.0289203>

- *Jibeen, T., & Khalid, R. (2010). Predictors of psychological well-being of Pakistani immigrants in Toronto, Canada. *International Journal of Intercultural Relations*, 34(5), 452-464. <https://doi.org/10.1016/j.ijintrel.2010.04.010>
- *Johnson, E. L. (2011). *Protective factors and levels of resilience among college students*. (Publication No. 3461056) [Unpublished doctoral dissertation, The University of Alabama]. ProQuest Dissertations and Theses Global.
- Johnstone, J., Rooney, R. M., Hassan, S., Kane, R. T. (2014). Prevention of depression and anxiety symptoms in adolescents: 42 and 54 months follow-up of the Aussie Optimism Program-Positive Thinking Skills. *Frontiers in Psychology*, 5(364). <https://doi.org/10.3389/fpsyg.2014.00364>
- *Jones, K. (2010). *Afrocentricity, homosexual identity integration, and other factors affecting the mental health, and psychological well-being of gay black men*. (Publication No. 3404073) [Unpublished doctoral dissertation, Walden University]. ProQuest Dissertations and Theses Global.
- Jordaan, J. E., Myers, R. A., Layton, W. C., & Morgan, H. H. (1968). *The Counseling Psychologist*. American Psychological Association.
- Joshanloo, M. (2014). Eastern conceptualizations of happiness: Fundamental differences with Western views. *Journal of Happiness Studies*, 15, 475-493. <https://doi.org/10.1007/s10902-013-9431-1>
- *Joshanloo, M., Jovanović, V., & Park, J. (2021). Differential relationships of *hedonic* and *eudaimonic* well-being with self-control and long-term orientation1. *Japanese Psychological Research*, 63(1), 47-57. <https://doi.org/10.1111/jpr.12276>
- *Joshi, V. (2022). The arts in psychotherapy: Psychological well-being, trait *emotional* intelligence, and self-esteem among dancers. *Indian Journal of Positive Psychology*, 13(4), 394-400.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86(1), 80–92. <https://doi.org/10.1037/0021-9010.86.1.80>

- Judge, T. A., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology*, 90(2), 257–268. <https://doi.org/10.1037/0021-9010.90.2.257>
- Juczyński, Z. (1999). Measurement tools in health psychology. *Przegląd Psychologiczny*, 42(4), 43-56.
- Judge, T. A., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: the role of self-concordance and goal attainment. *Journal of Applied Psychology*, 90(2), 257. <https://doi.org/10.1037/0021-9010.90.2.257>
- Jung, C. G. (1933). *Modern man in search of a soul*. Harcourt-Brace.
- *Kalaitzaki, A. E., Pattakou-Parasiri, V., & Foukaki, E. (2020). Depression, negative relating with the oldest child, and the mediating role of resilience in community elders' psychological well-being: A pilot study in Greece. *Psychogeriatrics*, 20(1), 70-78. <https://doi.org/10.1111/psyg.12461>
- Kalisch, R., Baker, D. G., Basten, U., Boks, M. P., Bonanno, G. A., Brummelman, E., ..., & Kleim, B. (2017). The resilience framework as a strategy to combat stress-related disorders. *Nature Human Behaviour*, 1(11), 784-790. <https://doi.org/10.1038/s41562-017-0200-8>
- *Karmakar, R., & Bhattacharyya, A. (2022). The role of gratitude and self-esteem in predicting psychological well-being. *Indian Journal of Positive Psychology*, 13(3), 207-211.
- Kashima, E. S., & Abu-Rayya, H. M. (2014). Longitudinal associations of cultural distance with psychological well-being among Australian immigrants from 49 countries. *Journal of Cross-Cultural Psychology*, 45(4), 587-600. <https://doi.org/10.1177/0022022113519857>
- Kazarian, S. S. (2005). Family functioning, cultural orientation, and psychological well-being among university students in Lebanon. *The Journal of Social Psychology*, 145(2), 141-154. <https://doi.org/10.3200/SOCP.145.2.141-154>
- *Kazemian Moghadam, K., & Haroon Rashidi, H. (2020). The relationship of psychological capital and spirituality at work with psychological well-being

in nurses. *Journal of Fundamentals of Mental Health*, 22(2), 83-89. <https://doi.org/10.22038/jfmh.2020.16146>

Keating, A., & Melis, G. (2022). Youth attitudes towards their future: the role of resources, agency and individualism in the UK. *Journal of Applied Youth Studies*, 5(1), 1-18. <https://doi.org/10.1007/s43151-021-00061-5>

Keyes, C. L. M., Dhingra, S. S., & Simoes, E. J. (2010). Change in level of positive mental health as a predictor of future risk of mental illness, *The American Journal of Public Health*, 100(12), 2366-2371. <https://doi.org/10.2105/AJPH.2010.192245>

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6), 1007- <https://doi.org/10.1037//0022-3514.82.6.1007>

*Khosla, I. (2021). Optimism and psychological well-being in Indian adults: Exploring gender and age differences. *Indian Journal of Positive Psychology*, 12(2), 141-150.

Kiamarsi A. 1998). Construction of a scale for measuring hardiness and its association with personality type. [Unpublished master's thesis, Ahvaz Azad University].

*Kilgour, J. M. (2004). *Steps toward a response-ability model of adaptation: Contributions of explanatory style, hope, and optimal experience to well-being*. (Publication No. 3140915) [Unpublished doctoral dissertation, Virginia Commonwealth University]. ProQuest Dissertations and Theses Global.

*Kim, J. (2019). Nursing students' relationships among resilience, life satisfaction, psychological well-being, and attitude to death. *Korean Journal of Medical Education*, 31(3), 251-260. <https://doi.org/10.3946/kjme.2019.135>

*Kim, H. (2022). In the COVID-19 era, effects of job stress, coping strategies, meaning in life and resilience on psychological well-being of women workers in the service sector. *International Journal of Environmental Research and Public Health*, 19(16), 9824. <https://doi.org/10.3390/ijerph19169824>

- *Kim, J. M., & Han, J. (2020). A predictive model on the hospital nurses' psychological well-being. *Japan Journal of Nursing Science*, 17(2), e12304-n/a. <https://doi.org/10.1111/jjns.12304>
- Kim, B., Jung, S. H., Jang, S. H., Lee, B., Rhee, E., Cho, S. H., & Lee, S. M. (2014). Construction and initial validation of the planned happenstance career inventory. *The Career Development Quarterly*, 62(3), 239-253. <https://doi.org/10.1002/j.2161-0045.2014.00082.x>
- *Kim, M., Kim, Y. D., & Lee, H.-W. (2020). It is time to consider athletes' well-being and performance satisfaction: The roles of authentic leadership and psychological capital. *Sport Management Review*, 23(5), 964-977. <https://doi.org/10.1016/j.smr.2019.12.008>
- Kim, H., Schimmack, U., Cheng, C., Webster, G. D., & Spectre, A. (2016). The role of positive self-evaluation on cross-cultural differences in well-being. *Cross-Cultural Research*, 50(1), 85-99. <https://doi.org/10.1177/1069397115617902>
- *Kim, H., Seo, J., & Park, C. (2022). The mediating effect of self-efficacy and coping strategy in relation to job stress and psychological well-being of home-visiting care workers for elderly during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(19), 12164. <https://doi.org/10.3390/ijerph191912164>
- *Klainin-Yobas, P., Ramirez, D., Fernandez, Z., Sarmiento, J., Thanoi, W., Ignacio, J., & Lau, Y. (2016). Examining the predicting effect of mindfulness on psychological well-being among undergraduate students: A structural equation modelling approach. *Personality and Individual Differences*, 91, 63-68. <https://doi.org/10.1016/j.paid.2015.11.034>
- Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37, 1-11. <https://psycnet.apa.org/doi/10.1037/0022-3514.37.1.1>
- *Kocaman, E. N. (2019). *Investigation of the relationship between hope and psychological well-being in a group of adults in terms of different variables*. (Publication No. 541377) [Unpublished master's thesis, İstanbul Sabahattin Zaim University]. Council of Higher Education Thesis Center.
- *Kocayörük, E., Altıntaş, E., Şimşek, Ö. F., Bozanoğlu, İ., & Çelik, B. (2018). Ontological wellbeing of university students: A cluster-analysis

approach. *Hacettepe University Journal of Education*, 33(3), 550-564. <https://doi.org/10.16986/huje.2017032927>

*Kordan, Z., Azimi Lolaty, H., Mousavinasab, S., & Heydari Fard, J. (2019). Relationship between psychological well-being and social capital and resilience among cancer patients. *Journal of Nursing and Midwifery Sciences*, 6(3), 131-137. https://doi.org/10.4103/JNMS.JNMS_11_19

Koydemir, S., Sökmez, A. B., & Schütz, A. (2021). A meta-analysis of the effectiveness of randomized controlled positive psychological interventions on subjective and psychological well-being. *Applied Research in Quality of Life*, 16, 1145-1185. <https://doi.org/10.1007/s11482-019-09788-z>

*Krok, D. (2020). Sense of coherence and psychological well-being among coronary heart disease patients: A moderated mediation model of affect and meaning in life. *Current Psychology*, 41(7), 4828-4836. <https://doi.org/10.1007/s12144-020-00982-z>

*Krok, D. (2022). Exploring basic hope as a mediator between attitudes towards religion and psychological well-being among Anglicans. *Studia Oecumenica*, 22, 219-236.

*Krok, D., & Kleszczewska-Albińska, A. (2019). Sense of coherence and psychological well-being in cardiac patients: Is the association mediated by self-efficacy? *Archives of Psychiatry and Psychotherapy*, 21(3), 15-24. <https://doi.org/10.12740/APP/109754>

*Kryazh, I. (2019). The positive effect of nature connectedness on psychological wellbeing: the significance of trust as a mediator. *Psychology. Journal of Higher School of Economics*, 16(1), 27-49.

Kurnaz, M. F., Teke, E., & Günaydın, H. A. (2020). Relationship between self-esteem and life satisfaction: A meta-analysis study. *Research on Education and Psychology*, 4(2), 236-253.

Kuroda, A., Tanaka, K., Kobayashi, R., Ito, T., Ushiki, A., & Nakamura, K. (2007). Effect of care manager support on health-related quality of life of caregivers of impaired elderly: One-year longitudinal study. *Industrial Health*, 45(3), 402-408. <https://doi.org/10.2486/indhealth.45.402>

- Lakens, D. (2022). Sample size justification. *Collabra: Psychology*, 8(1). <https://doi.org/10.1525/collabra.33267>
- *Lal, D. S., & Arya, B. (2017). Authenticity and sense of coherence as predictors of well-being. *Indian Journal of Psychological Science*, 8(2), 95-101.
- *Lammel, J. A. (2003). *Relationship between dimensions of leisure activity experience, sense of coherence, and psychological well-being, for traumatic brain injury survivors*. (Publication No. 3106271) [Unpublished doctoral dissertation, The Pennsylvania State University]. ProQuest Dissertations and Theses Global.
- Lawrie, S. I., Eom, K., Moza, D., Gavreliuc, A., & Kim, H. S. (2020). Cultural variability in the association between age and well-being: The role of uncertainty avoidance. *Psychological Science*, 31(1), 51-64. <https://doi.org/10.1177/0956797619887348>
- Lazarus, R. S., & Opton, E. M. (1966). A study of psychological stress: a summary of theoretical formulations and experimental findings. In: Spielberger, C. D. (Ed.). *Anxiety and Behavior*. Academic Press.
- Lazarus, R. S. (1999). Hope: An emotion and a vital coping resource against despair. *Social Research*, 66(2), 653-678. <https://www.jstor.org/stable/40971343>
- *Lee, J. K. (2022). The effects of social comparison orientation on psychological well-being in social networking sites: Serial mediation of perceived social support and self-esteem. *Current Psychology*, 41(9), 6247-6259. <https://doi.org/10.1007/s12144-020-01114-3>
- *Lee, H., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of Health Communication*, 19(12), 1343-1358. <https://doi.org/10.1080/10810730.2014.904022>
- *Lee, H., & Seo, K. (2019). Factors associated with psychological well-being among Korean nursing students. *Indian Journal of Public Health Research & Development*, 10(11). <https://doi.org/10.5958/0976-5506.2019.04324.9>
- Lee, T. K., Roh, S., Han, J. H., & Ko, Y. (2016). PO-18: Psychological factors associated with internet-based problem shopping behavior among South

Korean internet users. *Journal of Behavioral Addictions*, 5(S1), 53. <https://doi.org/10.5958/0976-5506.2019.04324.9>

Leontopoulou, S. (2006). Resilience of Greek youth at an educational transition point: The role of locus of control and coping strategies as resources. *Social Indicators Research*, 76, 95-126. <https://doi.org/10.1007/s11205-005-4858-3>

Leung, K. K., Silviu, J. L., Pimlott, N., Dalziel, W., & Drummond, N. (2009). Why health expectations and hopes are different: The development of a conceptual model. *Health Expectations*, 12(4), 347–360. <https://doi.org/10.1111/j.1369-7625.2009.00570.x>

Li, J.-B., Dou, K., Situ, Q.-M., Salcuni, S., Wang, Y.-J., & Friese, M. (2019). Anger rumination partly accounts for the association between trait self-control and aggression. *Journal of Research in Personality*, 81, 207–223. <https://doi.org/10.1016/j.jrp.2019.06.011>

Li, J. B., T. Vazsonyi, A., & Dou, K. (2018). Is individualism-collectivism associated with self-control? Evidence from Chinese and US samples. *PloS ONE*, 13(12), e0208541. <https://doi.org/10.1371/journal.pone.0208541>

Liao, K.Y.H., Stead, G.B. & Liao, C.Y. (2021). A meta-analysis of the relation between self-compassion and self-efficacy. *Mindfulness* 12, 1878–1891. <https://doi.org/10.1007/s12671-021-01626-4>

Lindström, B., & Eriksson, M. (2005). Salutogenesis. *Journal of Epidemiology & Community Health*, 59, 440-442. <https://doi.org/10.1136/jech.2005.034777>

Linnemann, P., Wellmann, J., Berger, K., & Teismann, H. (2020). Effects of age on trait resilience in a population-based cohort and two patient cohorts. *Journal of Psychosomatic Research*, 136, 110170. <https://doi.org/10.1016/j.jpsychores.2020.110170>

Littman-Ovadia, H., & Nir, D. (2014). Looking forward to tomorrow: The buffering effect of a daily optimism intervention. *The Journal of Positive Psychology*, 9(2), 122–136. <https://doi.org/10.1080/17439760.2013.853202>

Liu, D., Baumeister, R. F., Yang, C., & Hu, B. (2019). Digital communication media use and psychological well-being: A meta-analysis. *Journal of Computer-Mediated Communication*, 24, 259-274. <https://doi.org/10.1093/ccc/zmz013>

- Liu, F., Zhang, Z., Liu, S., & Feng, Z. (2022) Effectiveness of brief mindfulness intervention for college students' problematic smartphone use: The mediating role of self-control. *PLoS ONE* 17(12). <https://doi.org/10.1371/journal.pone.0279621>
- Lomas, T., Medina, J. C., Ivtzan, I., Rupprecht, S., & Eiroa-Orosa, F. J. (2019). Mindfulness-based interventions in the workplace: An inclusive systematic review and meta-analysis of their impact upon wellbeing. *The Journal of Positive Psychology*, 14(5), 625-640. <https://doi.org/10.1080/17439760.2018.1519588>
- Lopez, S. J., Magyar-Moe, J. L., Petersen, S. E., Ryder, J. A., Krieshok, T. S., O'Byrne, K. K., Lichtenberg, J. W., & Fry, N. A. (2006). Counseling psychology's focus on positive aspects of human functioning. *The Counseling Psychologist*, 34(2), 205-227. <https://doi.org/10.1177/0011000005283393>
- Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: Multicultural validation studies. *The Journal of Psychology*, 139(5), 439-457. <https://doi.org/10.3200/JRLP.139.5.439-457>
- Luthan, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60, 541-572. <https://doi.org/10.1002/da.10113>
- Luthans, F., & Youssef, C. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, 33, 143-160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Lyubomirsky, S. (2001). Why are some people happier than others? The role of cognitive and motivational processes in well-being. *American Psychologist*, 56(3), 239-249. <https://doi/10.1037//0003-066X.56.3.239>
- *Malekitabar, M., Riahi, M., & Malekitabar, A. R. (2017). The role of psychological capital in psychological well-being and job burnout of high schools' principals in Saveh, Iran. *Iranian Journal of Psychiatry and Behavioral Sciences*, 11(1). <https://doi.org/10.5812/ijpbs.4507>.

- *Malinauskas, R. (2017). Psychological wellbeing and self-esteem in students across the transition between secondary school and university: A longitudinal study. *Psihologija*, 50(1), 21-36. <https://doi.org/10.2298/PSI160506003M>
- Mao, T., Pan, W., Zhu, Y., Yang, J., Dong, Q., & Zhou, G. (2018). Self-control mediates the relationship between personality trait and impulsivity. *Personality and Individual Differences*, 129, 70–75. <https://doi.org/10.1016/j.paid.2018.03.013>
- *Margaça, C., Hernández-Sánchez, B., Sánchez-García, J. C., & Cardella, G. M. (2021). The roles of psychological capital and gender in university students' entrepreneurial intentions. *Frontiers in Psychology*, 11, 615910-615910. <https://doi.org/10.3389/fpsyg.2020.615910>
- Marks, L. I. (2011). Deconstructing locus of control: Implications for practitioners. *Journal of Counseling & Development*, 76(3), 251-260. <https://doi.org/10.1002/j.1556-6676.1998.tb02540.x>
- Marques, S. C., Gallagher, M. W., & Lopez, S. J. (2017). Hope-and academic-related outcomes: A meta-analysis. *School Mental Health*, 9, 250-262. <https://doi.org/10.1007/s12310-017-9212-9>
- Martin, A. M. (2011). Hopes and dreams. *Philosophy and Phenomenological Research*, 83(1), 148–173. <https://doi.org/10.1111/j.1933-1592.2010.00422.x>
- Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). Van Nostrand.
- *Masood, A., Sulman, M., Kamran, F., Ashraf, F., & Arshad, A. (2022). Contours of positivity as determinants of maternal psychological well-being in Pakistani children with and without hearing impairment. *International Journal of Disability, Development and Education*, 69(4), 1123-1135. <https://doi.org/10.1080/1034912X.2020.1755424>
- *Masood, A., Sulman, M., Kamran, F., Ashraf, F., & Arshad, A. (2022). Contours of positivity as determinants of maternal psychological well-being in Pakistani children with and without hearing impairment. *International Journal of Disability, Development, and Education*, 69(4), 1123-1135. <https://doi.org/10.1080/1034912X.2020.1755424>

- Matsumoto, D., Kouznetsova, N., Ray, R., Ratzlaff, C., Biehl, M., & Raroque, J. (1999). Psychological culture, physical health, and subjective well-being. *Journal of Gender, Culture, and Health*, 4, 1–18. <https://doi.org/10.1023/A:1023222308314>
- *Matud, M. P., Bethencourt, J. M., Ibáñez, I., Fortes, D., & Díaz, A. (2022). Gender differences in psychological well-being in emerging adulthood. *Applied Research in Quality of Life*, 17(2), 1001–1017. <https://doi.org/10.1007/s11482-021-09943-5>
- Matud, M. P., Ibáñez, I., Marrero, R. J., & Carballeira, M. (2003). Diferencias en autoestima en función del género [Gender differences on self-esteem]. *Análisis y Modificación de Conducta*, 29(123), 51–78. <http://hdl.handle.net/11162/20952>
- McCraty, R., & Atkinson, M. (2012). Resilience training program reduces physiological and psychological stress in police officers. *Global Advances in Health and Medicine*, 1, 42–64. <https://doi.org/10.7453%2Fgahmj.2012.1.5.013>
- McMahan, E.A., Estes, D., 2011. Hedonic versus eudaimonic conceptions of well-being: evidence of differential associations with self-reported well-being. *Social Indicators Research*, 103(1), 93–108. <https://doi.org/10.1007/s11205-010-9698-0>
- Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106, 3–19. <https://doi.org/10.1037/0033-295X.106.1.3>
- *Millear, P. (2013). All things being equal: Do personal resources contribute equally to well-being and mental health? *Asia Pacific Journal of Counselling and Psychotherapy*, 4(1), 89–101. <https://doi.org/10.1080/21507686.2013.778305>
- *Mock, S. E. (2005). *Coping with ALS: The role of optimism and social coping among patients and caregivers*. (Publication No. 3173417) [Unpublished doctoral dissertation, Cornell University]. ProQuest Dissertations and Theses Global.
- Mohammed, E.F., Sugawara, M., & Unher, M. (2010). Psychological Well-Being: A Comparative Study between Japanese and Egyptian Students. *Psychologia*, 53(2), 68. <https://doi.org/10.2117/psysoc.2010.68>

- Mohammadi, N., Aghayousefi, A., Nikrahan, G. R., Adams, C. N., Alipour, A., Sadeghi, M., Roohafza, H., Celano, C. M., & Huffman, J. C. (2018). A randomized trial of an optimism training intervention in patients with heart disease. *General Hospital Psychiatry*, 51, 46-53. <https://doi.org/10.1016/j.genhosppsych.2017.12.004>
- *Mohapatra, M., Madan, P., & Srivastava, S. (2023). Loneliness at work: Its consequences and role of moderators. *Global Business Review*, 24(3), 433-450. <https://doi.org/10.1177/0972150919892714>
- Moksnes, U. K. (2021). Sense of coherence. In: Gørill H., & Monica E. (Eds.), *Health promotion in health care-vital theories and research* (pp. 35–46). Springer. <https://doi.org/10.1007/978-3-030-63135-2>
- Moore, D. L., & Tarnai, J. (2002). Evaluating nonresponse error in mail surveys. In: Groves, R. M., Dillman, D. A., Eltinge, J. L., and Little, R. J. A. (Eds.), *Survey Nonresponse*, (pp. 197–211). John Wiley & Sons.
- Moons, P., Apers, S., Kovacs, A. H., Thomet, C., Budts, W., Enomoto, J., ..., & APPROACH-IS consortium and the International Society for Adult Congenital Heart Disease (ISACHD). (2021). Sense of coherence in adults with congenital heart disease in 15 countries: Patient characteristics, cultural dimensions and quality of life. *European Journal of Cardiovascular Nursing*, 20(1), 48-55. <https://doi.org/10.1177/1474515120930496>
- Mowla, F., Khanjari, S., & Haghani, S. (2020). Effect of the combination of Benson's relaxation technique and brief psychoeducational intervention on religious coping, sense of coherence, and quality of life of family caregivers. *Journal of Education and Health Promotion*, 28(9). https://doi.org/10.4103/jehp.jehp_653_19
- Moyers, S. A., & Hagger, M. S. (2023). Physical activity and sense of coherence: a meta-analysis. *International Review of Sport and Exercise Psychology*, 16(1), 257-285. <https://doi.org/10.1080/1750984X.2020.1846068>
- *Muench, P. A. (2003). Spirituality, hope, and psychological well-being among individuals diagnosed with fibromyalgia and/or chronic fatigue immune dysfunction syndrome. (Publication No. 3108191) [Unpublished doctoral dissertation, Brigham Young University]. ProQuest Dissertations and Theses Global.

- Mullen, B., Muellerleile, P., & Bryant, B. (2001). Cumulative meta-analysis: a consideration of indicators of sufficiency and stability. *Personality and Social Psychology Bulletin*, 27(11), 1450-1462. <https://doi.org/10.1177/01461672012711006>
- Murrell, S. A., & Norris, F. H. (1983). Resources, life events, and changes in psychological states: A prospective framework. *American Journal of Community Psychology*, (11), 5, 473-491.
- *Nath, P., & Pradhan, R. K. (2012). Influence of positive affect on physical health and psychological well-being: Examining the mediating role of psychological resilience. *Journal of Health Management*, 14(2), 161-174. <https://doi.org/10.1177/097206341201400206>
- Netz, Y., Wu, M. J., Becker, B. J., & Tenenbaum, G. (2005). Physical activity and psychological well-being in advanced age: A meta-analysis of intervention studies. *Psychology and Aging*, 20(2), 272-284. <https://doi.org/10.1037/0882-7974.20.2.272>
- *Neufeld, A., & Malin, G. (2019). Exploring the relationship between medical student basic psychological need satisfaction, resilience, and well-being: A quantitative study. *BMC Medical Education*, 19(1), 405-405. <https://doi.org/10.1186/s12909-019-1847-9>
- Neugarten, B. L., Havighurst, R. J., & Tobin, S. S. (1961). The measurement of life satisfaction. *Journal of Gerontology*, 16, 134-143. <https://psycnet.apa.org/doi/10.1093/geronj/16.2.134>
- *Noori, H., Ahadi, H., Malihi Alzakerini, S., & Kraskian, A. (2016). Development a model of the relationship of psychological well-being with self-efficacy, self-esteem and psychological hardiness in cancer patients of benign brain tumors. *International Journal of Medical Research & Health Sciences*, 5, 400-407.
- Nosek, M. A., Fuhrer, M. J., & Howland, C. A. (1992). Independence among people with disabilities: II. Personal independence profile. *Rehabilitation Counseling Bulletin*, 36(1), 21-36.
- *Novak, A. M., & Lev-Ari, S. (2023). Resilience, stress, well-being, and sleep quality in multiple sclerosis. *Journal of Clinical Medicine*, 12(2), 716. <https://doi.org/10.3390/jcm12020716>

- Nuckolls, K. G., Cassel, J., & Kaplan, B. H. (1972). Psychosocial assets, life crisis, and the prognosis of pregnancy. *American Journal of Epidemiology*, 95, 431–441. <https://psycnet.apa.org/doi/10.1017/CBO9780511759048.007>
- *Nwankwo, C. B., Okechi, B. C., & Nweke, P. O. (2015). Relationship between perceived self-esteem and psychological well-being among student athletes. *Academic Research Journal of Psychology and Counselling*, 2(1), 8-<https://doi.org/16.10.14662/IJALIS2015.040>
- Oades, L. G., & Johnston, A. L. (2017a). Wellbeing literacy: The necessary ingredient in positive education. *Psychology and Behavioral Science International Journal*, 3(5). <http://dx.doi.org/10.19080/PBSIJ.2017.03.555621>
- Oades L. G., Slade, M., & Jarden, A. (2017b). Optimism. In M. Slade, L. Oades, & A. Jarden (Eds.), *Wellbeing, recovery and Mental Health* (pp. 324–332). Cambridge University Press. <https://doi.org/10.1017/9781316339275>
- *Ok, Ü. (2009). Cognitive conflict and well-being among Muslim clergy. *Archive for the Psychology of Religion*, 31(2), 151-176. <https://doi.org/10.1163/157361209X424439>
- *Okpako, E. K., Lawrence, K. C., & Falaye, A. O. (2021). The state of psychological wellbeing of unemployed distinction graduates and the factors contributory to their wellbeing. *International Journal of Adolescence and Youth*, 26(1), 376-390. <https://doi.org/10.1080/02673843.2021.1963294>
- Oliver, C. M. (2009). *Hardiness, well-being, and health: A meta-analytic summary of three decades research*. (Publication No. 3391674) [Unpublished doctoral dissertation, Portland State University]. ProQuest Dissertations and Theses Global.
- Olsson, M., Hansson, K., Lundblad, A. M., & Cederblad, M. (2006). Sense of coherence: Definition and explanation. *International Journal of Social Welfare*, 15(3), 219-229. <https://doi.org/10.1111/j.1468-2397.2006.00410.x>
- *Ooi, H. X., Hamzah, A., & Thien, L. M. (2023). The influence of social support on postgraduate students' psychological well-being: Self-esteem as a mediator. *Participatory Educational Research*, 10(3), 150-166. <https://doi.org/10.17275/per.23.49.10.3>

- Orth, U., Robins, R. W., & Widaman, K. F. (2012). Life-span development of self-esteem and its effects on important life outcomes. *Journal of Personality and Social Psychology*, 102(6), 1271–1288. <https://doi.org/10.1037/a0025558>
- Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current Directions in Psychological Science*, 23(5), 381–387. <http://doi.org/10.1177/0963721414547414>
- Orwin, R.G. (1983). A fail-safe *N* for effect size in meta-analysis. *Journal of Educational Statistics*, 8, 157–159. <https://doi.org/10.3102/10769986008002157>
- Osin, E. N., & Rasskazova, E. I. (2013). A short version of the Hardiness Test: Psychometric properties and organizational application. *Vestnik Moskovskogo Universiteta. Seriya 14. Psikhologiya*, 2, 147–165.
- Ozer, E. M., & Bandura, A. (1990). Mechanisms governing empowerment effects: A self-efficacy analysis. *Journal of Personality and Social Psychology*, 58(3), 472–86. <https://doi.org/10.1037//0022-3514.58.3.472>
- Özdemir, S. M. (2008). An investigation of prospective primary teachers' self-efficacy beliefs regarding teaching process in terms of certain variables. *Educational Administration: Theory and Practice*, 54, 277–306.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578. <https://doi.org/10.3102/00346543066004543>
- Paradise, A. W., & Kernis, M. H. (1999). Development of the contingent self-esteem scale [Unpublished manuscript]. University of Georgia.
- Pareek, U. (2002). *Training instruments in HRD and OD* (2nd ed., pp. 545–546). Tata McGraw-Hill Publishing Company Limited.
- Peters, M. L., Meevissen, Y. M. C., & Hanssen, M. M. (2013). Specificity of the Best Possible Self intervention for increasing optimism: Comparison with a gratitude intervention. *Terapia Psicologica*, 31(1), 93–100. <https://doi.org/10.4067/S0718-48082013000100009>

- Peterson, C., & Seligman, M. E. (1987). Explanatory style and illness. *Journal of Personality*, 55(2), 237-65. <https://doi.org/10.1111/j.1467-6494.1987.tb00436.x>
- Pidgeon, A. M., Ford, L., & Klaassen, F. (2013). Evaluating the effectiveness of enhancing resilience in human service professionals using a retreat-based Mindfulness with Metta Training Program: A randomised control trial. *Psychoogy, Health and Medicine*, 19, 355–364. <https://doi.org/10.1080/13548506.2013.806815>
- *Pidgeon, A., & Keye, M. (2014). Relationship between resilience, mindfulness, and psychological well-being in university students. *International Journal of Liberal Arts and Social Science*, 2(5), 27-32.
- *Pierce, J. L., Gardner, D. G., & Crowley, C. (2016). Organization-based self-esteem and well-being: Empirical examination of a spillover effect. *European Journal of Work and Organizational Psychology*, 25(2), 181-199. <https://doi.org/10.1080/1359432X.2015.1028377>
- Piironen, I., Tuomainen, T. P., Tolmunen, T., Kauhanen, J., Kurl, S., Nilsen, C., ..., & Voutilainen, A. (2020). Sense of coherence and mortality: A systematic review and meta-analysis. *Psychosomatic Medicine*, 82(6), 561-567. <https://doi.org/10.1097/PSY.0000000000000812>
- *Popovych, I., Koval, I., Raievska, Y., Piletskyi, V., Buryanovatiy, O., & Hrynychuk, O. (2023). *Dominating* mental states of the representatives of individual sports under lockdown and martial law: Comparative analysis. *Journal of Physical Education and Sport*, 23(1), 170-178. <https://doi.org/10.7752/jpes.2023.01021>
- *Pozo, P., Sarriá, E., & Brioso, A. (2014). Family quality of life and psychological well-being in parents of children with autism spectrum disorders: a double ABCX model. *Journal of Intellectual Disability Research*, 58(5), 442-458. <https://doi.org/10.1111/jir.12042>
- Pritchard, A., Richardson, M., Sheffield, D., & McEwan, K. (2020). The relationship between nature connectedness and eudaimonic well-being: A meta-analysis. *Journal of Happiness Studies*, 21, 1145-1167. <https://doi.org/10.1007/s10902-019-00118-6>
- *Qi, W., Shi, J., & Cui, L. (2022). Parental optimism improves youth psychological well-being: Family cohesion and youth optimism as serial

mediators. *Healthcare*, 10(10),
<https://doi.org/10.3390/healthcare10101832>

1832-1840.

R Core Team (2015). *R: A language and environment for statistical computing*. Retrieved from Vienna, Austria: R Foundation for Statistical Computing. <http://www.R-project.org/>

Ramadhan, I., Keliat, B. A., & Wardani, I. Y. (2018). Assertive training and family psychological education therapy on adolescents' self-esteem in prevention of drug use in boarding school. *International Journal of Advanced Nursing Studies*, 7(1), 17-20. <https://doi.org/10.14419/ijans.v7i1.8598>

Rector, N. A. (1995). *Self-esteem and emotion-control in emotional and physical well-being*. (Publication No. C505163) [Unpublished doctoral dissertation, The University of York]. ProQuest Dissertations and Theses Global.

*Rehman, A. U., You, X., Wang, Z., & Kong, F. (2021). The link between mindfulness and psychological well-being among university students: The mediating role of social connectedness and self-esteem. *Current Psychology*, 42(14), 11772-11781. <https://doi.org/10.1007/s12144-021-02428-6>

Reichard, R. J., Avey, J. B., Lopez, S., & Dollwet, M. (2013). Having the will and finding the way: A review and meta-analysis of hope at work. *The Journal of Positive Psychology*, 8(4), 292-304. <https://doi.org/10.1080/17439760.2013.800903>

*Reis, N. A., Kowalski, K. C., Mosewich, A. D., & Ferguson, L. J. (2019). Exploring self-compassion and versions of masculinity in men athletes. *Journal of Sport & Exercise Psychology*, 41(6), 368-379. <https://doi.org/10.1123/jsep.2019-0061>

Reivich K, & Shatté A. (2002). *The resilience factor: 7 essential skills for overcoming life's inevitable obstacles*. Broadway Books.

Ren, M., Zou, S., Zhu, S., Shi, M., Li, W., & Ding, D. (2024). The effects of scarcity mindset on envy: The mediating role of the sense of control. *Current Psychology*, 43(8), 7612-7627. <https://doi.org/10.1007/s12144-023-04872-y>

- *Reul Kim, S., Park, O. L., Kim, H. Y., & Kim, J. Y. (2019). Factors influencing well-being in clinical nurses: A path analysis using a multi-mediation model. *Journal of Clinical Nursing*, 28(23-24), 4549-4559. <https://doi.org/10.1111/jocn.15045>
- *Richardson, A. L. (2020). *Self-esteem versus mastery: unique effects on psychological and social well-being and depression in a sexually diverse sample*. (Publication No. 28182028) [Unpublished doctoral dissertation, University of Houston]. ProQuest Dissertations and Theses Global.
- Rigotti, T., Schyns, B., & Mohr, G. (2008). A short version of the occupational self-efficacy scale: Structural and construct validity across five countries. *Journal of Career Assessment*, 16(2), 238–255. <https://doi.org/10.1177/1069072707305763>
- *Roberts, K. A. (2007). *Self-efficacy, self-concept, and social competence as resources supporting resilience and psychological well-being in young adults reared within the military community*. (Publication No. 3252532) [Unpublished doctoral dissertation, Fielding Graduate University]. ProQuest Dissertations and Theses Global.
- Roberts, A., Hinds, J., & Camic, P. M. (2020). Nature activities and wellbeing in children and young people: A systematic literature review. *Journal of Adventure Education and Outdoor Learning*, 20(4), 298-318. <https://doi.org/10.1080/14729679.2019.1660195>
- Rogers, C. R. (1961). *On becoming a person*. Houghton Mifflin.
- *Roohi, S., Noroozi, H., & Yousefi Afrashteh, M. (2019). Mediating role of resilience and self-efficacy in the relationship between cognitive emotion regulation strategies and psychological well-being of Iranian students. *Health Education and Health Promotion*, 7(4), 183-190.
- Rosenbaum, M., & Palmon, N. (1984). Helplessness and resourcefulness in coping with epilepsy. *Journal of Consulting and Clinical Psychology*, 52(2), 244–253. <https://doi.org/10.1037/0022-006X.52.2.244>
- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton University Press.

- Rosenberg, M. (1968). *Society and the adolescent self-image*. Wesleyan University Press.
- Rosenberg M (1986). *Conceiving the self*. Krieger.
- Rosenberg, M. (1989). *Society and the adolescent self-image*. Revised edition. Wesleyan University Press.
- Rosenthal, R. (1969). Interpersonal expectations. In R. Rosenthal and R.L. Rosnow (Eds.), *Artifact in Behavioral Research*. Academic Press.
- Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, 86(3), 638-64. <https://doi.org/10.1037/0033-2909.86.3.638>
- Roskams, M., & Haynes, B. (2020). Salutogenic workplace design: A conceptual framework for supporting sense of coherence through environmental resources. *Journal of Corporate Real Estate*, 22(2), 139-153. <https://doi.org/10.1108/JCRE-01-2019-0001>
- Rothstein, H. R., Sutton, A. J., & Borenstein, M. (2005). Publication bias in meta-analysis. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, Assessment and Adjustments* (pp. 1-8). Wiley. <http://dx.doi.org/10.1002/0470870168>
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1–28. <https://doi.org/10.1037/h0092976>
- Rusk, R. D., & Waters, L. E. (2013). Tracing the size, reach, impact, and breadth of positive psychology. *The Journal of Positive Psychology*, 8(3), 207–221. <https://doi.org/10.1080/17439760.2013.777766>
- Rustøen, T., Cooper, B. A., & Miaskowski, C. (2011). A longitudinal study of the effects of a hope intervention on levels of hope and psychological distress in a community-based sample of oncology patients. *European Journal of Oncology Nursing*, 15(4), 351-357. <https://doi.org/10.1016/j.ejon.2010.09.001>

- Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *The British Journal of Psychiatry*, 147(6), 598-611. <https://doi.org/10.1192/bjp.147.6.598>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publishing.
- Ryff, C. D. (1989a). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology* 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C.D. (1989b). Beyond Ponce de Leon and life satisfaction: New directions in quest of successful aging. *International Journal of Behavioral Development* 12, 35–55. <https://doi.org/10.1177/016502548901200102>
- Ryff, C. D. (1989c). In the eye of the beholder: views of psychological well-being among middle-aged and older adults. *Psychology and Aging*, 4(2), 195. <https://psycnet.apa.org/doi/10.1037/0882-7974.4.2.195>
- Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, 4(4), 99-104. <https://psycnet.apa.org/doi/10.1111/1467-8721.ep10772395>
- Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, 83, 10-28. <http://doi.org/10.1159/000353263>
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727. <https://doi.org/10.1037/0022-3514.69.4.719>

- Ryff, C. D., & Singer, B. (1996). Psychological well-being: Meaning, measurement, and implications for psychotherapy research. *Psychotherapy and Psychosomatics*, 65, 14-23. <http://doi.org/10.1159/000289026>
- Ryff, C. D., & Singer, B. (2008). Know thyself and become what you are: An eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9, 13-39. <http://doi.org/10.1007/s10902-006-9019-0>
- *Salama, C. H. (2014). *Exploring the moderating effects of acculturation on the relationship between collective self-esteem and psychological well-being among a sample of Arab Americans*. (Publication No. 1560773) [Unpublished doctoral dissertation, Southern Illinois University Edwardsville]. ProQuest Dissertations and Theses Global.
- Sánchez-Meca, J., & Marín-Martínez, F. (2010). Meta-analysis in psychological research. *Meta-analysis in Psychological Research*, 3(1), 150-162. <http://doi.org/10.21500/20112084.860>
- *Sandıkçı, M. (2014). *Analysis of the relationship between psychological wellbeing level of university students and different variables*. (Publication No. 368015) [Unpublished master's thesis, Haliç University]. Council of Higher Education Thesis Center.
- *Sangeetha, G. S., & Umadevi, G. (2022). Resilience, optimism & mindfulness: The tripod of wellbeing for chronically ill patients. *Journal of Positive School Psychology*, 1058-1065.
- *Santos, M., Ferraz, A., Bernardo, A. C., Machado, A. M., Evangelista, M., Ribeiro, I., & Pereira, M. G. (2023). Family functioning in a Portuguese sample of adults during COVID-19: Does hope matter? *Clínica y Salud*, 34(1), 1-8. <https://doi.org/10.5093/clysa2023a1>
- *Saritaş, S. (2019). *Examination of elementary teacher candidates' psychological well-being, occupational worry and self-efficacy beliefs*. (Publication No. 602459) [Unpublished master's thesis, Marmara University]. Council of Higher Education Thesis Center.
- Sasaki, N., Watanabe, K., & Imamura, K. et al. (2020). Japanese version of the 42-item psychological well-being scale (PWBS-42): A validation study. *BMC Psychology*, 8(75). <https://doi.org/10.1186/s40359-020-00441-1>

- Savickas, M. (2003). Toward a taxonomy of human strengths: Career counseling's contribution to positive psychology. In W. B. Walsh (Ed.), *Counseling psychology and optimal human functioning* (pp. 229-249). Lawrence Erlbaum.
- Schäfer, S. K., Becker, N., King, L., Horsch, A., & Michael, T. (2019). The relationship between sense of coherence and post-traumatic stress: A meta-analysis. *European Journal of Psychotraumatology*, 10(1), 1562839. <https://doi.org/10.1080/20008198.2018.1562839>
- Schäfer, S. K., Sopp, M. R., Fuchs, A., Kotzur, M., Maahs, L., & Michael, T. (2023). The relationship between sense of coherence and mental health problems from childhood to young adulthood: A meta-analysis. *Journal of Affective Disorders*, 325, 804-816. <https://doi.org/10.1016/j.jad.2022.12.106>
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219. <https://psycnet.apa.org/doi/10.1037/0278-6133.4.3.219>
- Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research*, 16(2), 201–228. <https://doi.org/10.1007/BF01173489>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063–1078. <https://doi.org/10.1037/0022-3514.67.6.1063>
- Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology*, 51(6), 1257–1264. <https://doi.org/10.1037//0022-3514.51.6.1257>
- *Schivinski, B., Brzozowska-Woś, M., Stansbury, E., Satel, J., Montag, C., & Pontes, H. M. (2020). Exploring the role of social media use motives, psychological well-being, self-esteem, and affect in problematic social media use. *Frontiers in Psychology*, 11, 617140-617140. <https://doi.org/10.3389/fpsyg.2020.617140>

- *Schlechter, P., Hellmann, J. H., & Morina, N. (2022). Self-discrepancy, depression, anxiety, and psychological well-being: The role of affective style and self-efficacy. *Cognitive Therapy and Research*, 46(6), 1075-1086. <https://doi.org/10.1007/s10608-022-10314-z>
- *Schlechter, P., Katenhusen, S., & Morina, N. (2023). The relationship of aversive and appetitive appearance-related comparisons with depression, well-being, and self-esteem: A response surface analysis. *Cognitive Therapy and Research*, 47(4), 621-636. <https://doi.org/10.1007/s10608-023-10369-6>
- *Schmieder, S., Reichhardt, A., Schneider, L., & Niklas, F. (2023). Trait mindfulness, self-efficacy, and coping strategies during COVID-19. *Anxiety, Stress, and Coping*, 36(6), 674-689. <https://doi.org/10.1080/10615806.2022.2159947>
- Schmitt, D.P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology*, 89, 623–642. <https://doi.org/10.1037/0022-3514.89.4.623>
- Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being. *Psychological Bulletin*, 140(4), 921-948. <https://doi.org/10.1037/a0035754>
- Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, 18(3), 242–251. <https://doi.org/10.1027/1015-5759.18.3.242>
- Schrank, B., Woppmann, A., Sibitz, I., & Lauber, C. (2011). Development and validation of an integrative scale to assess hope. *Health Expectations*, 14(4), 417-428. <https://doi.org/10.1111/j.1369-7625.2010.00645.x>
- Schreuder, E., Rijnders, M., Vaandrager, L., Hassink, J., Enders-Slegers, M. J., & Kennedy, L. (2014). Exploring salutogenic mechanisms of an outdoor experiential learning programme on youth care farms in the Netherlands: Untapped potential? *International Journal of Adolescent and Youth*, 19(2), 139–152. <https://doi.org/10.1080/02673843.2014.896267>
- Schwartz, S. J., Waterman, A. S., Cobb, C. L., Cano, M. Á., Scaramutti, C., Meca, A., Ozer, S., Ward, C., Puente-Durán, S., Lorenzo-Blanco, E. I., Unger, J. B., Duque, M. C., Vos, S. R., Zeledon, I., Garcia, M. F., & Martinez, C. R.

- (2022). Cultural stress, daily well-being, and internalizing and externalizing symptoms among Hispanic college students. *Journal of Counseling Psychology*, 69(4), 416-429. <https://doi.org/10.1037/cou0000604>
- Schwartz, R. (1992). *Self-efficacy: Thought control of action*. Hemisphere.
- Schwartz, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). NFER-Nelson.
- Schwartz, R. & Jerusalem, M. (2010). The general self-efficacy scale (GSE). *Anxiety, Stress, and Coping*, 12, 329-345.
- Schworer, C. E., May, D. R., Hollensbe, E. C., & Mencl, J. (2005). General and specific self-efficacy in the context of a training intervention to enhance performance expectancy. *Human Resource Development Quarterly*, 16(1), 111-129. <https://doi.org/10.1002/hrdq.1126>
- Seligman, M. E. P. (1975). *Helplessness*. Freeman.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14. <https://doi/10.1037/0003-066X.55.1.5>
- *Shaikh, M., Vyas, M., & Naik, A. R. (2023). Educating wellness: Developing towards a mentally healthier society. *Indian Journal of Positive Psychology*, 14(2), 13-20.
- Shakarami, M., Davarniya, R., Zahraei, K., & Hosseini, A. (2014). The predictive role of psychological capital, psychological hardiness and spiritual intelligence in students' psychological well-being. *Journal of Research and Health*, 4(4), 935-943.
- Shakespeare-Finch, J., Rees, A., & Armstrong, D. (2015). Social support, self-efficacy, trauma and well-being in emergency medical dispatchers. *Social Indicators Research*, 123(2), 549-565. <https://doi.org/10.1007/s11205-014-0749-9>

- Shanahan, M. L., Fischer, I. C., Hirsh, A. T., Stewart, J. C., & Rand, K. L. (2021). Hope, optimism, and clinical pain: a meta-analysis. *Annals of Behavioral Medicine*, 55(9), 815-832. <https://doi.org/10.1093/abm/kaab001>
- *Sharifi, Z., & Moltafet, G. (2021). The prediction of psychological well-being based on gratitude, social support and self-esteem. *International Journal of Behavioral Sciences*, 15(2), 127-132. <https://doi.org/10.30491/ijbs.2021.266815.1455>
- *Sharma, C., & Sharma, N. R. (2019). Positive psychological capital as indicator of psychological well-being. *IAHRW International Journal of Social Sciences Review*, 7(3), 463-466.
- Sheldon, K. M., & King, L. (2001). Why positive psychology is necessary? *American Psychologist*, 56(3), 216-217. <https://doi.org/10.1037//0003-066X.56.3.216>
- Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports*, 51(2), 663-671. <https://doi.org/10.2466/pr0.1982.51.2.663>
- Shi, L., & Lin, L. (2019). The trim-and-fill method for publication bias: practical guidelines and recommendations based on a large database of meta-analyses. *Medicine*, 98(23), 1-11. <http://dx.doi.org/10.1097/MD.00000000000015987>
- Shin, W. Y., Kim, M. G., & Kim, J. H. (2009). Developing measures of resilience for Korean adolescents and testing cross, convergent, and discriminant validity. *Studies on Korean Youth*, 20(4), 105-131.
- Shoji, K., Cieslak, R., Smoktunowicz, E., Rogala, A., Benight, C. C., & Luszczynska, A. (2015). Associations between job burnout and self-efficacy: A meta-analysis. *Anxiety, Stress, & Coping*, 29(4), 367-386. <https://doi.org/10.1080/10615806.2015.1058369>
- Shorey, H. S., & Snyder, C. R. (2004, July). *Exploring the possibility of a revised Hope Scale* [Poster presentation]. American Psychological Association Convention, Honolulu, HI, United States.

- Sinclair, V. G., & Wallston, K. A. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment*, 11(1), 94-101. <https://doi.org/10.1177/1073191103258144>
- Singh, N., Wahler, P., Adkins, A., & Myers, S., (2003). Soles of the feet: A mindfulness-based self-control intervention for aggression by an individual with mild mental retardation and mental illness. *Research in Developmental Disabilities*, 24, 158–169. [https://doi.org/10.1016/S0891-4222\(03\)00026-X](https://doi.org/10.1016/S0891-4222(03)00026-X)
- *Siqui, H. (2017). *Psychological and academic entitlement: Psychosocial and cultural predictors and relationships with psychological well-being*. (Publication No. 7266) [Unpublished master's thesis, University of Windsor]. Windsor Electronic Thesis and Dissertations.
- Skinner, E. A. (1996). A guide to the construct of control. *Journal of Personality and Social Psychology*, 71, 549–570. <https://psycnet.apa.org/doi/10.1037/0022-3514.71.3.549>
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15(3), 194–200. <https://doi.org/10.1080/10705500802222972>
- Smith, B. W., Tooley, E. M., Christopher, P. J., & Kay, V. S. (2010). Resilience as the ability to bounce back from stress: A neglected personal resource? *The Journal of Positive Psychology*, 5(3), 166–176. <https://doi.org/10.1080/17439760.2010.482186>
- Snyder, C. R. (2000). The past and possible futures of hope. *Journal of Social and Clinical Psychology*, 19 (1), 11 – 28. <https://doi.org/10.1521/jscp.2000.19.1.11>
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., ... & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60(4), 570. <https://psycnet.apa.org/doi/10.1037/0022-3514.60.4.570>
- Snyder, C. R., Sympton, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology*, 70(2), 321–335. <https://doi.org/10.1037/0022-3514.70.2.321>

- *Sobhani, Z., Amini, M., Hosseini, S. V., Khazraei, S., & Khazraei, H. (2020). Self-efficacy, happiness and psychological well-being after sleeve gastrectomy. *World Journal of Surgery*, 44(12), 4193-4196. <https://doi.org/10.1007/s00268-020-05761-2>
- *Soucase, B., García-Alandete, J., & Rubio-Belmonte, C. (2023). Presence of/search for meaning and positive psychological functioning in Spanish emerging adults. *Current Psychology*, 42(3), 2198-2207. <https://doi.org/10.1007/s12144-021-02394-z>
- *Souri, H., & Hasanirad, T. (2011). Relationship between resilience, optimism and psychological well-being in students of medicine. *Procedia-Social and Behavioral Sciences*, 30, 1541-1544. <https://doi.org/10.1016/j.sbspro.2011.10.299>
- Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, 139(1), 213–240. <https://doi.org/10.1037/a0028931>
- *Soylu, C., & Uçanok, Z. (2019). Meaning in life as A mediator of associations between self-esteem and psychological adjustment among middle-aged women with breast cancer. *Studies in Psychology*, 43(1), 93-115. <https://doi.org/10.26650/SP2022-1057478>
- Springer, K. W., Pudrovskaya, T., & Hauser, R. M. (2011). Does psychological well-being change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological well-being. *Social Science Research*, 40(1), 392-398. <https://doi.org/10.1016/j.ssresearch.2010.05.008>
- Srivastava, S., & Kapoor, V. (2021). Coping stress for psychological well-being: role of locus of control and demographic variables. *International Journal of Indian Culture and Business Management*, 22(2), 195-212. <https://doi.org/10.1504/IJICBM.2021.113009>
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133, 65-94. <http://dx.doi.org/10.1037/0033-2909.133.1.65>
- Steel, P., Taras, V., Uggerslev, K., & Bosco, F. (2018). The happy Culture: A theoretical, meta-analytic, and empirical review of the relationship between

culture and wealth and subjective well-being. *Personality and Social Psychology Review*, 22(2), 128–169.
<https://doi.org/10.1177/1088868317721372>

*Stein, C. H., Osborn, L. A., & Greenberg, S. C. (2016). Understanding young adults' reports of contact with their parents in a digital world: Psychological and familial relationship factors. *Journal of Child and Family Studies*, 25(6), 1802-1814. <https://doi.org/10.1007/s10826-016-0366-0>

Sterne, J. A., Becker, B. J., & Egger, M. (2005). The funnel plot. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 1-8). Wiley.
<http://dx.doi.org/10.1002/0470870168>

Sterne, J. A., & Egger, M. (2001). Funnel plots for detecting bias in meta-analysis: Guidelines on choice of axis. *Journal of Clinical Epidemiology*, 54(10), 1046–1055. [https://doi.org/10.1016/s0895-4356\(01\)00377-8](https://doi.org/10.1016/s0895-4356(01)00377-8)

Steinhardt, M., & Dolbier, C. (2008). Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology. *Journal of American College Health*, 56(4), 445–453.
<https://doi/10.3200/JACH.56.44.445-454>

Steinmetz, J., & Mussweiler, T. (2017). Only one small sin: How self-construal affects self-control. *British Journal of Social Psychology*, 56(4), 675-688.
<https://doi.org/10.1111/bjso.12208>

*Stewart, K., & Townley, G. (2019). Intrapersonal and social-contextual factors related to psychological well-being among youth experiencing homelessness. *Journal of Community Psychology*, 47(4), 772-789. <https://doi.org/10.1002/jcop.22152>

Stieger, M., Allemand, M., & Lachman, M. E. (2023). Effects of a digital self-control intervention to increase physical activity in middle-aged adults. *Journal of Health Psychology*, 28(10), 984-996.
<https://doi/10.1177/13591053231166756>

Sutton, A. J., & Pigott, T. D. (2005). Bias in meta-analysis induced by incompletely reported studies. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 1-8). Wiley. <http://dx.doi.org/10.1002/0470870168>

- *Swaran-Lata., D. H. (2020). Optimism and spirituality in relation to psychological well-being among middle aged adults. *Indian Journal of Gerontology*, 34(1), 67-83.
- Szczuka, Z., Banik, A., Abraham, C., Kulis, E., & Luszczynska, A. (2021). Associations between self-efficacy and sedentary behaviour: A meta-analysis. *Psychology & Health*, 36(3), 271–289. <https://doi.org/10.1080/08870446.2020.178441>
- Şen, S., & Akbaş, N. (2016). A study on multilevel meta-analysis methods. *Journal of Measurement and Evaluation in Education and Psychology*, 7(1), 1-17. <https://doi.org/10.21031/epod.29995>
- Şimşek, Ö. F., & Kocayörük, E. (2013). Affective reactions to one's whole life: Preliminary development and validation of the ontological well-being scale. *Journal of Happiness Studies*, 14(1), 309-343. <https://doi.org/10.1007/s10902-012-9333-7>.
- Talsma, K., Schütz, B., Schwarzer, R., & Norris, K. (2018). I believe, therefore I achieve (and vice versa): A meta-analytic cross-lagged panel analysis of self-efficacy and academic performance. *Learning and Individual Differences*, 61, 136-150. <https://doi.org/10.1016/j.lindif.2017.11.015>
- *Tamba, G. I., & Iancu, I. (2023). Emerging adults and the use of textual digital communication: A reflection on self-esteem, loneliness, anxiety, and wellbeing. *Research in Social Sciences and Technology*, 8(1), 31-50. <https://doi.org/10.46303/ressat.2023.3>
- Tang, M., Wang, D., & Guerrien, A. (2020). A systematic review and meta-analysis on basic psychological need satisfaction, motivation, and well-being in later life: Contributions of self-determination theory. *PsyCh Journal*, 9(1), 5-33. <https://doi.org/10.1002/pchj.293>
- Tangney, J. P., Baumeister R. F., & Boone A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- Tay, J. L., Goh, Y.S.S., Sim, K., & Klainin-Yobas, P. (2022). Impact of the HOPE intervention on mental health literacy, psychological well-being and stress levels amongst university undergraduates: A randomised controlled trial.

- Tejada-Gallardo, C., Blasco-Belled, A., Torrelles-Nadal, C., & Alsinet, C. (2020). Effects of school-based multicomponent positive psychology interventions on well-being and distress in adolescents: A systematic review and meta-analysis. *Journal of Youth and Adolescence*, 49(10), 1943-1960. <https://doi.org/10.1007/s10964-020-01289-9>
- Tetzner, J., Drewelies, J., Duezel, S., Demuth, I., Wagner, G. G., Lachman, M., Lindenberger, U., Ram, N., & Gerstorf, D. (2024). Stability and change of optimism and pessimism in late midlife and old age across three independent studies. *Psychology and Aging*, 39(1), 14–30. <https://doi.org/10.1037/pag0000789>
- Thoits, P. A. (1994). Stressors and problem-solving: The individual as psychological activist. *Journal of Health and Social Behavior*, 35(2), 143–160. <https://doi.org/10.2307/2137362>
- Thoits, P. A. (2006). Personal agency in the stress process. *Journal of Health and Social Behavior*, 47, 309–23.
- Thompson, K., Herens, M., van Ophem, J., & Wagemakers, A. (2021). Strengthening sense of coherence: Evidence from a physical activity intervention targeting vulnerable adults. *Preventive Medicine Reports*, 24. <https://doi.org/10.1016/j.pmedr.2021.101554>
- Thompson, S. G., & Higgins, J. P. (2002). How should meta-regression analyses be undertaken and interpreted? *Statistics in Medicine*, 21(11), 1559-1573. <https://doi.org/10.1002/sim.1187>
- *Tiittanen, M. (2014). *Grit and different aspects of well-being: Direct and indirect effects via sense of coherence and authenticity*. [Unpublished master's thesis, Lund University].
- *Toor, S. U. R., & Ofori, G. (2009). Authenticity and its influence on psychological well-being and contingent self-esteem of leaders in Singapore construction sector. *Construction Management and Economics*, 27(3), 299-313. <https://doi.org/10.1080/01446190902729721>

Torgerson, C. (2003). *Systematic reviews*. Continuum International Publishing Group.

*Tripathi, P. (2011). Employee well-being: Role of psychological capital. *Amity Journal of Applied Psychology*, 2(1), 18-21.

Trzebiński, J., & Zięba, M. (2004). Basic hope as a world-view: An outline of a concept. *Polish Psychological Bulletin*, 35(3), 173-182.

Turner, E. H., Matthews, A. M., Linardatos, E., Tell, R. A., & Rosenthal, R. (2008). Selective publication of antidepressant trial and its influence on apparent efficacy. *The New England Journal of Medicine*, 358(3), 252-260. <https://doi.org/10.1056/nejmsa065779>

*Usta, F. (2013). *The relation between psychological well-being and hope level considering college students*. (Publication No. 336034 [Unpublished master's thesis, Sakarya University]. Council of Higher Education.

Uysal, A., & Knee, C. R. (2012). Low trait self-control predicts self-handicapping. *Journal of Personality*, 80(1), 59–79. <https://doi.org/10.1111/j.1467-6494.2011.00715.x>

*Uzar-Özçetin, Y. S., Sarıoğlu, G., & Dursun, S. I. (2019). Resilience, burnout and psychological well-being levels of oncology nurses. *Current Approaches in Counseling*, 11, 147-164. <https://doi.org/10.18863/pgy.598097>

*Vainio, M. M., & Daukantaitė, D. (2016). Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, 17(5), 2119-2147. <https://doi.org/10.1007/s10902-015-9688-7>

*Valickas, A., Raišienė, A. G., & Rapuano, V. (2019). Planned happenstance skills as personal resources for students' psychological wellbeing and academic adjustment. *Sustainability*, 11(12), 3401. <https://doi.org/10.3390/su11123401>

Valle, M. F., Huebner, E. S., & Suldo, S. M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology*, 44(5), 393–406. <https://doi.org/10.1016/j.jsp.2006.03.005>

- van der Meulen, E., van der Velden, P. G., van Aert, R. C., & van Veldhoven, M. J. (2020). Longitudinal associations of psychological resilience with mental health and functioning among military personnel: A meta-analysis of prospective studies. *Social science & Medicine*, 255, 112814. <https://doi.org/10.1016/j.socscimed.2020.112814>
- *van Schaick, L. A. (2011). *Predicting resilience and psychological well-being in early adulthood: The role of religion in childhood and adolescence*. (Publication No. 3415678) [Unpublished doctoral dissertation, St. John's University]. ProQuest Dissertations and Theses Global.
- Veenstra, M., Moum, T. & Roysamb, E. (2005). Relationships between health domains and sense of coherence: A two-year cross-lagged study in patients with chronic illness. *Quality of Life Research*, 14, 1455–1465. <https://doi.org/10.1007/s11136-004-0015-8>
- Vevea, J. L., Coburn, K., & Sutton, A. (2019). Publication bias. In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (pp. 383-432). Russell Sage Foundation. <https://doi.org/10.7758/9781610448864>
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, 36(3), 1–48. <https://doi.org/10.18637/jss.v036.i03>
- Vohs, K. D., & Baumeister, R. F. (2004). Understanding self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 1-9). Guilford.
- *Voon, S.P., Lau, P.L., Leong, & K.E. et al. (2022). Self-compassion and psychological well-being among Malaysian counselors: The mediating role of resilience. *The Asia-Pacific Education Researcher*, 31, 475–488. <https://doi.org/10.1007/s40299-021-00590-w>
- Wagnild, G. (2016). *The resilience scale user's guide: for the U.S. English version of the Resilience Scale TM and the 14-Item Resilience ScaleTM (RS-14TM)*. Worden, MT: The Resilience Center.
- Wagnild, G. M. (2009). A review of resilience scale. *Journal of Nursing Measurement*, 17(2), 105-113. <https://10.1891/1061-3749.17.2.105>

- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement*, 1(2), 165–178.
- Wahyuningsih, H., Ayu Kusumaningrum, F., & Novitasari, R. (2020). Parental marital quality and adolescent psychological well-being: A meta-analysis. *Cogent Psychology*, 7. <https://doi.org/10.1080/23311908.2020.1819005>
- Wallston, K. A., Stein, M. J., & Smith, C. A. (1994). Form C of the MHLC scales: a condition-specific measure of locus of control. *Journal of Personality Assessment*, 63(3), 534-553. https://doi.org/10.1207/s15327752jpa6303_10
- Wang, H., Sha, H., Liu, L., & Zhao H. (2022). Exploring the relationship between perceived community support and psychological well-being of tourist destinations residents. *International Journal of Environmental Research and Public Health*, 19(21). <https://doi.org/10.3390/ijerph192114553>
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678–691. <https://psycnet.apa.org/doi/10.1037/0022-3514.64.4.678>
- *Waterman, A. S., Schwartz, S. J., Hardy, S. A., Kim, S. Y., Lee, R. M., Armenta, B. E., Whitbourne, S. K., Zamboanga, B. L., Brown, E. J., Williams, M. K., & Agocha, V. B. (2013). Good choices, poor choices: Relationship between the quality of identity commitments and psychosocial functioning. *Emerging Adulthood*, 1(3), 163–174. <https://doi.org/10.1177/2167696813484004>
- *Watson, L. B., Morgan, S. K., & Craney, R. (2018). Bisexual women's discrimination and mental health outcomes: The roles of resilience and collective action. *Psychology of Sexual Orientation and Gender Diversity*, 5(2), 182–193. <https://doi.org/10.1037/sgd0000272>
- Weissbecker, I., Salmon, P., Studts, J.L. et al. (2002). Mindfulness-based stress reduction and sense of coherence among women with fibromyalgia. *Journal of Clinical Psychology in Medical Settings* 9, 297–307. <https://doi.org/10.1023/A:1020786917988>
- *Wetzel, J. L. (2007). *The effects of first generation status on the well-being of undergraduate students: A study in the relationship between well-being, perceived social support, self-esteem, and adaptation to college among a*

unique group of non-traditional students. (Publication No. 3368443) [Unpublished doctoral dissertation, The University of Detroit]. ProQuest Dissertations and Theses Global.

*White, R. L. (2008). *The association of social responsibility endorsement with race-related experiences, racial attitudes, and psychological outcomes among Black college students.* (Publication No. 3343254) [Unpublished doctoral dissertation, The University of Michigan]. ProQuest Dissertations and Theses Global.

WHO. (2001). *Strengthening mental health promotion.* World Health Organization.

Wilson, W. (1967). Correlates of avowed happiness. *Psychological Bulletin*, 67, 294–406. <https://psycnet.apa.org/doi/10.1037/h0024431>

Xiang, C. C., Wang, X., Xie, T. T., & Fu, C. L. (2023). Differential effects of work and family support on the relationship between surface acting and wellbeing: A self-determination theory approach. *Psychological Reports*, 126(1), 198-219. <https://doi.org/10.1177/00332941211048471>

Vohs, K. D., & Schmeichel, B. J. (2002). What makes hope hopeful? The relationship between hope and self-regulation. *Psychological Inquiry*, 13(4), 318-321. <https://www.jstor.org/stable/1448877>

Yamazaki, Y., Togari, T., & Sokano, J. (2011). Toward development of intervention methods for strengthening the sense of coherence: suggestions from Japan. In Muto, T., Nakahara, T., & Nam, E.W. (Eds) *Asian Perspectives and Evidence on Health Promotion and Education.* Springer. https://doi.org/10.1007/978-4-431-53889-9_12

Yang, Y. H., Kim, E. M., Yu, M., Park, S., & Lee, H. (2015). Development of the resilience scale for Korean nursing college students. *Korean Journal of Adult Nursing*, 27(3), 337-346. <https://doi.org/10.7469/kjan.2015.27.3.337>

Yang, X, Zhao, J., Chen, Y., Zu, S, & Zhao, J. (2018). Comprehensive self-control training benefits depressed college students: A six-month randomized controlled intervention trial. *Journal of Affective Disorders*, 226,251-260. <https://doi.org/10.1016/j.jad.2017.10.014>

- Yarcheski, A., Mahon, N. E., Yarcheski, T. J., & Cannella, B. L. (2004). A meta-analysis of predictors of positive health practices. *Journal of Nursing Scholarship*, 36(2), 102–108. <https://doi.org/10.1111/j.1547-5069.2004.04021.x>
- Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress & health: Journal of the International Society for the Investigation of Stress*, 31(3). <https://doi.org/10.1002/smi.2623>
- *Yu, Y. (2021). *The relationship between ethnicity, psychological well-being, and resilience: Mediation analysis of acculturation*. (Publication No. 28320079) [Unpublished doctoral dissertation, Marywood University]. ProQuest Dissertations and Theses Global.
- *Yu, J., & Chae, S. (2020). The mediating effect of resilience on the relationship between the academic burnout and psychological well-being of medical students. *Korean Journal of Medical Education*, 32(1), 13-21. <https://doi.org/10.3946/kjme.2020.149>.
- *Zayas, A., Merchán-Clavellino, A., López-Sánchez, J.A., & Guil, R. (2021). Confinement situation of the Spanish population during the health crisis of COVID-19: Resilience mediation process in the relationship of dispositional optimism and psychological well-being. *International Journal of Environmental Research and Public Health*, 18(12). <https://doi.org/10.3390/ijerph18126190>
- *Zeigler-Hill, V., & Wallace, M. T. (2012) Self-esteem instability and psychological adjustment. *Self and Identity*, 11(3), 317-342. <https://doi.org/10.1080/15298868.2011.567763>
- Zhang, Z., & Chen, W. (2019). A systematic review of measures for psychological well-being in physical activity studies and identification of critical issues. *Journal of Affective Disorders*, 256, 473-485. <https://doi.org/10.1016/j.jad.2019.06.024>
- Zhao, K. (2021). Sample representation in the social sciences. *Synthese* (198), 9097–9115. <https://doi.org/10.1007/s11229-020-02621-3>

Note. References starting with an asterisk are the ones that were included in the meta-analysis.

APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

DUMLU PINAR BULVARI 06800
ÇANKAYA ANKARA/TURKEY
T: +90 312 210 22 31
F: +90 312 210 79 59
ueam@metu.edu.tr
www.ueam.metu.edu.tr

Sayı: 28620816 /

14 MART 2022

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç. Dr. Zeynep HATİPOĞLU SÜMER

Danışmanlığını yürüttüğünüz Ayşegül Aracı İYİAYDIN'ın "To What Extent are Intra-Personal Factors Effective for Psychological Well-Being: A Meta-Analysis Study" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **0132-ODTÜİAEK-2022** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

B. CURRICULUM VITAE

Educational Background			
High School		Nişantaşı Nuri Akın Anatolian High School, graduate ranking third in school	2002
Bachelor's Degree	Department of Educational Sciences/Psychological Counseling and Guidance Program	Boğaziçi University	2007
Master's Degree	ÇAPA Faculty of Medicine, Child Health Institute/Department of Family Health/Mother- Child Health Program	İstanbul University	2012
Master's Degree	Social Sciences Institute/Department of Educational Sciences/ Psychological Counseling and Guidance Program	Middle East Technical University	2018
PhD Degree	Social Sciences Institute/Department of Educational Sciences/ Psychological Counseling and Guidance Program	Middle East Technical University	2024

7. Publications:

7.1. Articles published in international refereed journals (SSCI):

Aracı-İyiaydın, A., Çok, F., Atay, Ş., & Serttaş, Ş. Y. (in press). Stress and coping experiences of Turkish emerging adults during COVID-19: A qualitative study. *Psychology in the Schools*.

Çetinkaya-Yıldız, E., **Aracı-İyiaydın, A.,** & Toplu-Demirtaş, E. (in press). No trust no satisfaction: The ill fortune of insecure attachment in marriage. *Family Relations*.

- Toplu-Demirtaş, E., & **Aracı-İyiaydın, A.** (2023). Seeding a change on knowledge about, attitudes towards, and perceptions of dating violence in Turkish prospective counselors: Effectiveness of a prevention program. *Journal of Family Violence*. <https://doi.org/10.1007/s10896-023-00666-9>
- Toplu-Demirtaş, E., Soysal, E., Mesut, C., & **Aracı-İyiaydın, A.** (2023). Making the myths of dating violence visible: Developing a new scale and testing its psychometrics through cross-sectional and longitudinal evidence. *Journal of Interpersonal Violence*, 38(13-14), 8136-8161. <https://doi.org/10.1177/08862605231153890>
- Aracı-İyiaydın, A.**, Toplu-Demirtaş, Akçabozan-Kayabol, B., & Rohner, R. P. (2023). All you fear is love: Recollections of parental rejection moderated by intimate partner rejection and gender result in the fear of intimacy in adulthood. *Personal Relationships*, 30(2), 451-470. <https://doi.org/10.1111/pere.12473>
- Ummak, E., Toplu-Demirtaş, E., & **Aracı-İyiaydın, A.** (2023). Absorbed homophobia, exposed violence: The present absence of lesbian and bisexual women identities in Türkiye and Denmark. *Violence and Victims*, 38(2), 213-233. <https://doi.org/10.1891/vv-2021-0128>
- Toplu-Demirtaş, E., & **Aracı-İyiaydın, A.** (2023). What goes around comes around: The loop of physical teen dating violence perpetration. *New Directions for Child and Adolescent Development*, (178), 95-113. <https://doi.org/10.1002/cad.20440>
- Aracı-İyiaydın, A.**, Hatipoğlu-Sümer, Z. (2021). The mediational role of intimate partner acceptance and psychological adjustment in the relationship between intimate partner control and marital adjustment. *Current Psychology*, 42, 1598-1608. <https://doi.org/10.1007/s12144-021-01468-2>
- Aracı-İyiaydın, A.**, Toplu-Demirtaş, E., Akçabozan-Kayabol, N. B., Fincham, F. D. (2022). I ruminate therefore I violate: The tainted love of anxiously attached and jealous partners. *Journal of Interpersonal Violence*, 37(9-10), 129-155. <https://doi.org/10.1177/0886260520967743>
- Toplu-Demirtaş, E., Kayabol-Akçabozan, B., **Aracı-İyiaydın, A.**, Fincham, F. D. (2022). Unraveling the roles of distrust, anticipated partner infidelity, and jealousy in cyber dating abuse perpetration: An attachment theory perspective. *Journal of Interpersonal Violence*, 37(3-4), 1432-1462. <https://doi.org/10.1177/0886260520927505>

7.2. Articles published in other international refereed journals (Scopus):

- Karacan-Özdemir, N. & **Aracı-İyiaydın, A.** (2019). Ethical decision making for risky behaviors: A model for school counseling in Türkiye. *Elementary Education Online*, 18(3), 15-26.

7.3. Articles published in national refereed journals (TR Index):

Aracı-İyiaydın, A., & Yılmaztürk, N. H., Serhatoğlu, S., & Çok, F. (2019). Social Networking Sites and adolescence: A content analysis of published studies. *Başkent University Journal of Education*, 6(2), 225-235.

Aracı-İyiaydın, A., & Gökçay, G. (2018). The interplay between peer attachment and aggression in early adolescence: The mediator role of father and mother attachment. 20. *International Guidance and Psychological Counseling Congress Full Text Book*, 112-121.

7.4. Paper presentations presented at international conferences and published at conference proceedings:

Aracı-İyiaydın, A., Başar, B., Akdemir, Ç., & Ayvaz, D. (2023). The effect of university students' participation in a sexual awareness-based training program on the belief in sexual myths, sexual attitudes, and sexual knowledge levels, 2023 II. International Adolescence and Youth Research Association Congress, September 6-8, Nevşehir, Türkiye.

Akçabozan-Kayabol, B., & Aracı-İyiaydın, A. (2022). Work-life balance of LGBTQ+ families: A systematic review from a diversity perspective, 2022 IARR Main Conference on Applied Relationship Science, July 28-August 02, Virtual Conference.

Aracı-İyiaydın, A., Çok, F., Altunay H., Atay, Ş., & Serttaş, Y. (2022). Stress and coping experiences of Turkish emerging adults during Covid-19: A qualitative study. International Child and Trauma Congress, 24-26 March, İzmir.

Aracı-İyiaydın, A. & Çapa-Aydın, Y. (2021). A trial to measure helicopter parenting in a sample of Turkish adolescents. The European Conference on Educational Research, September 7, Virtual Conference, Geneva.

Toplu-Demirtaş, E., Akçabozan-Kayabol, B. & Aracı-İyiaydın, A. (2021). Babe, will you cheat on me? The development of a new measure of perceived partner infidelity intentions, 2021 IARR Main Conference on Applied Relationship Science, August 11, Virtual Conference, United Kingdom.

Tuna, M. E., Aracı-İyiaydın, A., Karşı-Çalamak, E. (2019). Teaching in multicultural classes: The personality traits of teachers and their attitudes towards multicultural education. International Teacher Education and Accreditation Congress (ITEAC'2019), November 30 –December 1, Ankara, Türkiye.

Toplu-Demirtaş, E., Aracı-İyiaydın, A., & Akçabozan-Kayabol, B. (2019). Darling I don't trust you: Psychological Dating Violence from the Perspective of Anxious Violence, 2019 IARR Mini Conference on Applied Relationship Science, July 18-21, Brighton, United Kingdom.

Özmen, O. & **Aracı-İyiaydın, A.** (2018). The content of individual counseling course, perceptions and expectations for supervision: TED University Case. XX. International Psychological Counseling and Guidance Congress, October 25-27, Samsun, Türkiye.

Aracı-İyiaydın, A., & Gökçay, G. (2018). The interplay between peer attachment and aggression in early adolescence: The mediator role of father and mother attachment. XX. International Psychological Counseling and Guidance Congress, October 25-27, Samsun, Türkiye.

Saranlı, A., Deniz, K.Z., & **Aracı-İyiaydın, A.** (2018). A Research about the Views of Students about the Inovative Factors in our Education Program: There are enjoyable, interesting, challenging and choice friendly classroom activities in our schools (or not?). 27th International Conference on Educational Sciences, April 18-22, Antalya.

Aracı-İyiaydın, A., & Hatipoğlu-Sümer, Z. (2018). The associations among perceived intimate partner acceptance-rejection/control, psychological adjustment, and marital adjustment. 7th International Congress of Interpersonal Acceptance & Rejection, May 15-18, Athens, Greece.

Aracı-İyiaydın, A., & Yılmaztürk, N. H., Serhatoğlu, S., & Çok, F. (2017). Social Networking Sites and adolescence: A content analysis of published studies. 18th European Conference on Developmental Psychology, August 29-September 1, Utrecht, The Netherlands.

Aracı-İyiaydın, A. , & Yılmaztürk, H. (2016). Psychological Analysis of a Series Character : Gregory House. Başkent University Psychology and Art Symposium V, October 13-14, Ankara.

Aracı-İyiaydın, A., & Karacan, N. (2016). Ethical and Legal Issues in School Counseling: Two Case Presentation. VI. National Congress on Applied Guidance and Psychological Counseling, December 1-3, Gaziantep.

7.5. Paper presentations presented at national conferences and published at conference proceedings:

Aracı-İyiaydın, A. , & Yılmaztürk, H. (2016). Psychological Analysis of a Series Character : Gregory House. *Başkent University Psychology and Art Symposium V (Oral Presentation)*, October 13-14, Ankara.

Aracı-İyiaydın, A., & Karacan, N. (2016). Ethical and Legal Issues in School Counseling: Two Case Presentation. VI. *National Congress on Applied Guidance and Psychological Counseling (Oral Presentation)*, December 1-3, Gaziantep.

7.6. Books and chapters published by national/international publishers:

Aracı-İyiaydın, A. (2022). Attachment Theory in Close Relationships. Burcu Üçok (Ed.), *Close Relationships*. Ankara: Nobel

7.7. Other publications:

Aracı-İyiaydın, A. (2016). Success fear: A psychoanalytic view of self-sabotage. *Türk PDR Bulletin*, 4 (28).

Aracı-İyiaydın, A. (2017). Use of therapeutic cards in psychological counseling sessions. *Türk PDR Bulletin*, 4 (28).

Aracı-İyiaydın, A. (2021). What is wrong with loneliness? *Psikolektif*, 11. <http://psikolektif.com/psikolektif-dergisi/psikolektif-dergisi-sayi-11-yalnizlik/>

Aracı-İyiaydın, A. (2021). Ethical violations in school counseling withing the context of values. *Psikolektif Speaker's Corner*. <http://psikolektif.com/serbest-kursu/degerler-cercevesinde-okul-psikolojik-danismanliginda-sinir-ihlalleri/>

8. Projects:

September 2016-August 2018: BAP 16B0005/ Researcher, “Structured Peer Group Supervision at TEDU” (w/ Assist. Prof. Onur Özmen)

February 2017- September 2017: TEDU LAD Project / Project Advisor / “Investigating the Relationship Amongst Parents’ Screen Time, Children’s Screen Time and Maturity of Children’s Drawings” (w/ Assist. Prof. Ceyda Öztekin)

May 2017- June 2018 : TÜBİTAK 3001 115K814 Project Assistant, “The Effects of Enrichment Methods Based on the Schoolwide Enrichment Model on Primary School Children”

Project Coordinator: Ass. Prof. Dr. Adile Gülşah Saranlı, TED University, ANKARA.

November 2018- January 2020: TÜBİTAK 1003 215K478 Project Assistant, “MIGRA-MATH: Supporting Teachers of Immigrant Students with Respect to their Mathematics Education Professional Practices”

Project Coordinator: Ass. Prof. Dr. Mana Ece Tuna, TED University, ANKARA.

January 2022- March 2023: TEDU LAD Project / Project Advisor/ “The Effect of University Students’ Participation in a Sexual Awareness-Based Training Program on Beliefs in Sexual Myths, Sexual Attitudes, and Sexual Knowledge”

9. Ongoing Research Submitted for SSCI Journals:

Aracı-İyiaydın, A., & Ergun, A. (in review). When womanhood turns into otherhood: Choosing childlessness in Türkiye. *Journal of Middle East Women’s Studies*.

Özmen, O., Aracı-İyiaydın, A., & Altunay-Yılmaz, H. (in preparation). "That which does not kill us, makes us stonger", does it so? Post-traumatic growth in Turkish medical doctors during COVID-19. *Journal of Loss & Trauma*.

Akçabozan-Kayabol, B., & Aracı- İyiaydın, A. (in preparation for a special issue). A systematic review on work-life balance of same-sex couples. *Journal of Social and Personal Relationships*.

Aracı-İyiaydın, A., & Çapa-Aydın, Y. (in preparation). Children who are not allowed to be grown up: A trial to measure helicopter parenting in a sample of Turkish adolescents. *Educational and Psychological Measurement*.

10. Courses Offered

2022-2023 Spring: Theories of Personality (TED University, Psychological Counseling and Guidance Program)

2022-2023 Spring: Psychology of Intimate Relationships (TED University, Psychological Counseling and Guidance Program)

2022-2023 Spring: Internship in Schools (TED University, Psychological Counseling and Guidance Program)

2021-2022 Fall: Addiction Prevention (TED University, Psychological Counseling and Guidance Program)

2021-2022 Fall: Theories of Personality (TED University, Psychological Counseling and Guidance Program)

2020-2021 Fall: Internship III - Individual Counseling (MEF University, Psychological Counseling and Guidance Program)

2020-2021 Spring: Internship IV – Group Counseling (MEF University, Psychological Counseling and Guidance Program)

11. Affiliations:

Boğaziçi University Graduates Foundation (BÜMED)

Turkish Psychological Counseling and Guidance Foundation

Turkish Psychological Counseling and Guidance Association Bulletin Editor Team Member (June 2016- September 2017)

Turkish Psychological Counseling and Guidance Association Bulletin Editor (since October 2017)

12. Professional Trainings

September 26, 2007–January 27, 2008 (40 hours): Cognitive Intervention Model Education for Learning Problems, Ass. Prof. Tamer Ergin, Altis Neurology and Psychological Counseling Center, İstanbul.

October 2007-January 2008 (36 hours): Introduction to Psychological Counseling Seminars, GÜNCE Psychological Counseling Center, İstanbul.

October 3-4, 2007 (16 hours): Child Psychopathologies, Psychiatrist Dr. Evren Tufan, Logos Psychological Counseling Center, İstanbul.

September 2009-June 2010 (80 hours): Evaluation of Child and Adolescent Drawings with Projective Methods, Clinical Psychologist Funda Akkapulu, Rorschach and Projective Tests Foundation, İstanbul.

August 19-22 2010 (20 hours): Solution-Focused Therapy, Nevin Dölek, Bakış Psychological Counseling Center, İstanbul.

September 2012- June 2013 (96 hours): Supervision, Prof. Dr. Bahar Gökler, Dr. Clinical Psychologist Çağay Dürü, Carpe Diem Psychological Counseling Center, Ankara.

October 1, 2013 – June 23, 2014 (80 hours): Family and Marriage Therapy 1st and 2nd levels, Prof. Dr. Hürol Fıfıloğlu, Middle East Technical University Lifelong Education Center, Ankara.

October 5, 2013- January 2015 (150 hours): Rorschach Test Training and Supervision- Clinical Psychologist İrem Erdem Atak, Rorschach and Projective Tests Foundation, İstanbul.

February 27-28, 2014 (12 hours): Using Therapeutic Cards in Counseling Sessions, Nevin Dölek, Bakış Psychological Counseling Center, İstanbul.

March 20, 2015 (4 hours): “Preventive Approaches and Implementations For Drug Addiction in High Schools”, Prof. Dr. Kültegin Ögel, Mentha Clinic, İstanbul.

13. Administrative Duties

(2018-....) Member, TEDU Faculty of Education, Comission of Accreditation

(2018-2019) Member, TEDU Faculty of Education, Comission of Web and Social Media

(2020-2021) Komisyon Üyesi, TEDÜ Eğitim Fakültesi Öğrenci Destek Komisyonu

14. Organizational and Professional Services:

December 20, 2020: “Psychological Well-Being in Pandemic” seminar (High school students of Fen Bilimleri Schools in different cities of Türkiye)

January 21, 2021: “How to Manage the Process of National Exam Preparation” (8th grade students of TED Çorum College)

February 25, 2021: “How to Manage the Process of National Exam Preparation” (All TED 8th grade students with full scholarship)

March 8, 2021: “Parenting in the Process of National Exam Preparation” (TED Kocaeli Parents of 8th grade students)

15. Other Work Experience (Education, Industry etc.):

August 2012 – July 2016: Middle East Technical University Development Foundation Private High School Counseling Service as Psychological Counselor (Ankara-Türkiye)

August 2007 – June 2012: İstek Foundation Private Primary School Counseling Service – Coordinator Psychological Counselor (İstanbul-Türkiye)

September 2006-May 2007: Kabataş Male Anatolian High School and Saint Pulcherie French High School Counseling Services as Intern for one year (two days a week) (İstanbul-Türkiye)



C. HOFSTEDE'S SIX CULTURAL DIMENSIONS

Country of Origin of the Participants	Power Distance	Individualism	Motivation towards Achievement and Success	Uncertainty Tolerance	Long-Term Orientation	Indulgence
Australia	38	73	61	51	56	71
Canada	39	72	52	48	54	68
China	80	43	66	30	77	24
Germany	35	79	66	65	57	40
Greece	60	59	57	100	51	50
India	77	24	56	40	51	26
Iran	58	23	43	59	30	40
Israel	13	56	47	81	47	0
Italy	50	53	70	75	39	30
Lithuania	60	58	39	85	86	29
Malaysia	100	27	50	36	47	57
Nigeria	80	0	60	55	8	84
Pakistan	55	5	50	70	19	0
Philippines	94	17	64	44	46	42
Poland	68	47	64	93	49	29
Portugal	63	59	31	99	42	33
Romania	90	46	42	90	32	20
Singapore	74	43	48	8	67	46
South Korea	60	58	39	85	86	29
Spain	57	67	42	86	47	44
Sweden	31	87	5	29	52	78
Türkiye	66	46	45	85	35	49
UK	35	76	66	35	60	69
Ukraine	92	55	27	95	51	14
United Arab Emirates	74	36	52	66	22	22
USA	40	60	62	46	50	68
Vietnam	70	30	40	30	47	35

* Each number in the table represents the score out of 100 for each Hofstede cultural dimension for the listed countries. The higher the score, the stronger the identification with the corresponding cultural dimension.

D. DESCRIPTIVE INFORMATION OF THE MAIN STUDIES

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
1a	Agarwall & Malhotra, 2019	optimism	.600	100	university students	N/A	18-25	India	Optimism Index (Banerjee, 2016)
1b	Agarwall & Malhotra, 2019	resilience	.410	100	university students	N/A	18-25	India	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
2	Ahmadi & Ramazani, 2020	hope	.640	324	university students	110F, 90M	N/A	Iran	Hope Scale (Schneider, 1991)
3a	Akfirat, 2020	self-esteem	.662	403	university students	206F, 197M	<i>M</i> = 27.7	Türkiye	Rosenberg Self-Esteem Scale (Rosenberg, 1965)
3b	Akfirat, 2020	self-efficacy	.287	403	university students	206F, 197M	<i>M</i> = 27.7	Türkiye	General Self-Efficacy Scale (Schwarzer & Jerusalem, 1981)
3c	Akfirat, 2020	hope	.486	403	university students	206F, 197M	<i>M</i> = 27.7	Türkiye	Beck Hopelessness Scale (1974)
4	Alfred, 2014	resilience	.710	117	student veterans	117M	19-52 <i>M</i> = 28.6	USA	The Dispositional Resilience Scale-30 (Bartone, 1991)
5a	Altıntaş, 2019	resilience	.660	129	women exposed to physical violence	129F	≤25-≥46	Türkiye	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
5b	Altıntaş, 2019	resilience	.700	97	women not exposed to physical violence	97F	≤25-≥46	Türkiye	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
6a	Amin & Ahmad Shah, 2020	self-efficacy	.217	100	post-graduate doctors	45F, 55M	24-45	India	Psychological Capital Scale (Luthans et al., 2007)
6b	Amin & Ahmad Shah, 2020	resilience	.242	100	post-graduate doctors	45F, 55M	24-45	India	Psychological Capital Scale (Luthans et al., 2007)
6c	Amin & Ahmad Shah, 2020	optimism	.209	100	post-graduate doctors	45F, 55M	24-45	India	Psychological Capital Scale (Luthans et al., 2007)
6d	Amin & Ahmad Shah, 2020	hope	.271	100	post-graduate doctors	45F, 55M	24-45	India	Psychological Capital Scale (Luthans et al., 2007)
7	Anjum, 2022	resilience	.390	208	university students	99F, 107M	N/A	India	Short Hardiness Scale (Bartone, 2007)
8	Archana et al., 2014	resilience	.370	186	university students	92F, 94M	21-24 <i>M</i> = 28.6	India	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
9	Arya et al., 2018	sense of coherence	.504	250	medicine and engineering students	N/A	17-25	India	The Sense of Coherence-Orientation to Life Questionnaire (Antonovsky, 1987)
10	Au et al., 2023	resilience	.572	141	university students	109F, 31M, 1Unknown	18-61 <i>M</i> = 24.8	Australia	The Resilience Scale (Wagnild & Young, 1995)
11	Awan & Sitwat, 2014	self-esteem	.520	120	mental health professionals	31F, 89M	<i>M</i> = 34.09	Pakistan	Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
13	Balcan, 2023	self-control	.272	220	military gendarmes	8F, 212M	M= 38.52	Romania	The Ways of Coping Scale's Self-Control Subscale (Folkman & Lazarus)
14	Banerjee et al., 2022	locus of control	.332	100	young adults	62F, 38M	18-25	India	The Locus of Control Scale (Rotter, 1966)
15	Beltran-Morillas et al., 2023	self-efficacy	.350	200	working professionals	174F, 26M	23-69 M= 43.91	Spain	General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
16	Bevino, 1999	sense of coherence	.780	118	divorced people	68F, 51M	18-65	USA	The Sense of Coherence Scale (Antonovsky, 1987)
17	Beydoğan Tangör & Curun, 2019	self-esteem	.580	130	university students	86F, 44M	18-29 M=19.92	Türkiye	Rosenberg Self-Esteem Scale (Rosenberg, 1965)
18a	Biassoni et al., 2022	optimism	.425	1471	people locked down in COVID process	1051F, 420M	18-81 M=40.43	Italy	The Life Orientation Test-Revised (Scheier et al., 1995)
18b	Biassoni et al., 2022	hope	.569	1471	people locked down in COVID process	1051F, 420M	18-81 M=40.43	Italy	The Adult Hope Scale (Fowler et al., 2017)
19	Biclar et al., 2022	self-efficacy	.390	106	family caregivers with spinal cord injury	78F, 28M	18-76	Philippines	The General Self-Efficacy Scale (Schwarzer & Jarusalem, 1995)
20	Blankenship, 1998	self-control	.420	190	senior adults	150F, 40M	65-93	USA	Perceived Independence Profile (Nosek et al., 1992)
21	Bowlin & Baer, 2012	self-control	.530	280	university students	176F, 104M	M= 19.0	USA	The Self-Control Scale (Tangney et al., 2004)
22	Brooks, 2020	locus of control	.398	2073	university students	1724F, 349M	18-40+	USA	The Locus of Control Scale (Rotter, 1966)
23	Calvo et al., 2020	resilience	.830	96	emerging adults & adults	57F, 39M	19.6-69.8 M= 30.9	Italy	The Resilience Scale for Adults (Friborg et al., 2006)
24	Carol, 2007	hope	.650	82	mothers of children with autism	82F	M= 42	USA	The Hope Scale (Snyder et al., 1991)
25	Carotta et al., 2022	hope	.340	560	emerging adults & adults	281F, 273M, 6 Other	20-71 M= 33.69	USA	The Adult State Hope Scale (Snyder et al., 1996)
26	Cedres, 2020	self-esteem	.040	190	emerging adults & adults	190F	18-60+	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
27a	Cenkseven, 2004	self-esteem	.620	500	university students	205F, 295M	17-28 M= 21.76	Türkiye	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
27b	Cenkseven, 2004	locus of control	.390	500	university students	205F, 295M	17-28 M= 21.76	Türkiye	The Locus of Control Scale (Rotter, 1966)
28	Cesar, 2014	optimism	.700	150	individuals experienced a traumatic life event within the past 7 years	N/A	at least 18 years old	USA	The Life Orientation Test-Revised (Scheier et al., 1995)
29	Chen et al., 2021	resilience	.530	1871	university students	N/A	N/A	China	Wagnild's 14-item Resilience Scale (Wagnild, 2016)
30a	Chiracu et al., 2023	self-efficacy	.650	98	mother caregivers of individuals with down syndrome	98F	25-76 M=52.13	Romania	Psychological Capital Questionnaire

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
30b	Chiracu et al., 2023	resilience	.650	98	mother caregivers of individuals with down syndrome	98F	25-76 M=52.13	Romania	Psychological Capital Questionnaire (Luthans et al., 2007)
30c	Chiracu et al., 2023	optimism	.790	98	mother caregivers of individuals with down syndrome	98F	25-76 M=52.13	Romania	Psychological Capital Questionnaire (Luthans et al., 2007)
30d	Chiracu et al., 2023	hope	.740	98	mother caregivers of individuals with down syndrome	98F	25-76 M=52.13	Romania	Psychological Capital Questionnaire (Luthans et al., 2007)
31	Choi, 2019	self-esteem	.520	1009	fathers	1009F	M=38.9	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
32	Clifford-Alfred, 2011	resilience	.710	117	male student veterans	117M	19-52 M=28.6	USA	The Dispositional Resilience Scale (Bartone, 1991)
33a	Cobner, 1999	locus of control	.160	52	patients with thalassemia	23F, 29M	18-47 M=26.63	UK	The Multidimensional Health Locus of Control Scale C- Internal Locus of Control Subscale (Walston et al., 1995)
33b	Cobner, 1999	self-efficacy	.650	52	patients with thalassemia	23F, 29M	18-47 M=26.23	UK	The Generalized Self-Efficacy Scale (Schwarzer, 1992)
34	Cole, 2013	hope	.780	366	university students	366M	18-40 M=20.24	USA	Trait Hope Scale-Revised (Shorey & Snyder, 2004)
35	Cooper et al., 1995	self-control	.280	110	university students	79F, 31M	N/A	USA	The Locus of Control Scale (Rotter, 1966)
36	Crawford & Kashubeck-West, 2023	optimism	.750	251	sexual minorities	various gender identities	18-72 M=31.88	USA	Personal Optimism Scale (Gavrilov-Jerković et al., 2014)
37	Czyzowska & Gurba, 2021	self-efficacy	.830	80	emerging adults	56F, 24M	18-29 M=21.01	Poland	The Generalized Self-Efficacy Scale (Schwarzer, 1992)
38	Dagang et al., 2022	self-esteem	-.254	103	orphans	38F, 65M	18 years olds	Malaysia	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
39a	Değirmenci, 2019	optimism	.410	394	public officials	100F, 294M	18-41+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
39b	Değirmenci, 2019	resilience	.510	394	public officials	100F, 294M	18-41+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
40	Deuskar & Abhyankar, 2022	resilience	.664	296	emerging adults and adults	168F, 132M	20-60 M=32.50	India	PsycPositive (Abhyankar, 2016)
41	Dhingraand & Lata, 2020	optimism	.377	177	permanent residents in Delhi	90F, 87M	40-60	India	The Life Orientation Test-Revised (Scheier et al., 1995)
42	Dinesh et al., 2022	self-efficacy	.592	794	life insurance agents of private companies	315F, 479M	18-55	India	The Self-Efficacy Scale (Luszczynska et al., 2005)

43a	Dionigi et al., 2020	self-efficacy	.490	160	Italian volunteer clown doctors	102F, 58M	20-60 M=32.50	Italy	Perceived Personal Efficacy (Barbaranelli & Capanna, 2001)
-----	----------------------	---------------	------	-----	---------------------------------	-----------	------------------	-------	--

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
43b	Dionigi et al., 2020	optimism	.450	160	Italian volunteer clown doctors	102F, 58M	20-60 M=32.50	Italy	The Life Orientation Test-Revised (Scheier et al., 1995)
44	Diouf, 2021	resilience	.652	327	Catholic priests, religious men and women	136F, 191M	18-69+	28 different countries	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
45	Eghbali et al., 2022	resilience	.780	410	people with multiple sclerosis	310F, 100M	18-64 M=37.07	Iran	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
46	Ekas et al., 2010	optimism	.590	119	mothers of children with autism spectrum disorder	119F	23-61 M=40.13	USA	The Life Orientation Test (Scheier et al., 1985)
47	Ektaş, 2017	resilience	.760	200	mothers of children with autism spectrum disorder	200F	20-40+	Türkiye	Resilience Scale (Friborg et al., 2010)
48	Elderkin, 2020	self-efficacy	.500	374	university students	226F, 148M	18-64	USA	The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
49a	Elik-Besdil, 2020	hope	.486	141	employees who work in energy market	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
49b	Elik-Besdil, 2020	self-efficacy	.402	141	employees who work in energy market	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
49c	Elik-Besdil, 2020	resilience	.280	141	employees who work in energy market	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
49d	Elik-Besdil, 2020	optimism	.430	141	employees who work in energy market	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
50	Elizabeth et al., 2023	optimism	.386	60	college teachers	N/A	N/A	India	The Life Orientation Test-Revised (Scheier et al., 1995)
51	Eroğlu, 2020	self-esteem	-.015	476	nursing students	341F, 135M	18-21 M=40.13	Türkiye	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
52a	Esen et al., 2021	optimism	.630	141	employees who work in energy sector (98 of them are engineers)	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
52b	Esen et al., 2021	resilience	.486	141	employees who work in energy sector (98 of them are engineers)	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
52c	Esen et al., 2021	self-efficacy	.470	141	employees who work in energy sector (98 of them are engineers)	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)

52d	Esen et al., 2021	hope	.402	141	employees who work in energy sector (98 of them are engineers)	34F, 107M	20-46+	Türkiye	Psychological Capital Questionnaire (Luthans et al., 2007)
-----	-------------------	------	------	-----	--	-----------	--------	---------	--

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
53	Eşkisü, 2021	resilience	.486	416	university students	266F, 140M	M=20.43	Türkiye	Psychological Resilience Scale (Işık, 2016)
54a	Franz et al., 2013	self-esteem	.660	672	middle aged twin men (monozygotic)	672M	51-59 M=55.4	Vietnam	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
54b	Franz et al., 2013	self-esteem	.760	544	middle aged twin men (dizygotic)	544M	51-59 M=55.4	Vietnam	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
55	Freire et al., 2018	self-efficacy	.532	1402	university students	964F, 438M	M=21.11	Spain	The General Self-Efficacy Scale (Baessler & Schwarzer, 1996)
56	Gaskin, 2015	self-esteem	.650	192	Black emerging adult students	104F, 84M	M=20.39	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
57	Gera, 2022	hope	.657	76	COVID-19 Survivors	37F, 39M	20-60 M=33.4	India	The Adult Hope Scale (Snyder et al., 1991)
58a	Gibson & Hicks, 2018	self-efficacy	.530	121	employed people	74F, 47M	18-74 M=43	Australia	Psychological Capital Questionnaire (Luthans et al., 2007)
58b	Gibson & Hicks, 2018	hope	.520	121	employed people	74F, 47M	18-74 M=43	Australia	Psychological Capital Questionnaire (Luthans et al., 2007)
58c	Gibson & Hicks, 2018	resilience	.450	121	employed people	74F, 47M	18-74 M=43	Australia	Psychological Capital Questionnaire (Luthans et al., 2007)
58d	Gibson & Hicks, 2018	optimism	.580	121	employed people	74F, 47M	18-74 M=43	Australia	Psychological Capital Questionnaire (Luthans et al., 2007)
58e	Gibson & Hicks, 2018	self-esteem	.610	121	employed people	74F, 47M	18-74 M=43	Australia	Core Self-Evaluations Scale (Judge et al., 2005)
58f	Gibson & Hicks, 2018	locus of control	.590	121	employed people	74F, 47M	18-74 M=43	Australia	Core Self-Evaluations Scale (Judge et al., 2005)
58g	Gibson & Hicks, 2018	self-efficacy	.690	121	employed people	74F, 47M	18-74 M=43	Australia	Core Self-Evaluations Scale (Judge et al., 2005)
59a	Grabowska-Chenczke et al., 2022	locus of control	.600	147	university students, employed people, and those who are unable to work	147M	N/A	Poland	The Self-Control Scale (Tangney et al., 2004)
59b	Grabowska-Chenczke et al., 2022	locus of control	.660	155	university students, employed people, and those who are unable to work	155M	N/A	Poland	The Self-Control Scale (Tangney et al., 2004)
60	Green, 2020	self-efficacy	.890	724	final year bachelor's students	311F, 413M	M=23.3	Pakistan	The Generalized Self-Efficacy Scale

									(Schwarzer & Jerusalem, 1995)
61	Guan et al., 2020	self-esteem	.600	129	Chinese American female undergraduates	129F	18-25 M=20.24	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
62	Haghighyeghi et al., 2023	resilience	.660	863	Iranian community-dwelling adults	552F, 311M	18-67 M=35.3	Iran	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
63a	He et al., 2018	resilience	.640	538	undergraduate nursing students	461F, 77M	18-57 M=36.23	Australia	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
63b	He et al., 2018	self-efficacy	.570	538	undergraduate nursing students	461F, 77M	18-57 M=36.23	Australia	The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
64	Heo et al., 2016	optimism	.398	2670	older adults with cancer experience	1552F, 1118M	47-106 M=78.54	USA	The Life Orientation Test (Scheier et al., 1985)
65a	Hernandez-Varas et al., 2019	hope	.620	492	Spanish military staff	8F, 484M	20-55 M=30.38	Spain	Psychological Capital Questionnaire (Luthans et al., 2007)
65b	Hernandez-Varas et al., 2019	self-efficacy	.610	492	Spanish military staff	8F, 484M	20-55 M=30.38	Spain	Psychological Capital Questionnaire (Luthans et al., 2007)
65c	Hernandez-Varas et al., 2019	resilience	.630	492	Spanish military staff	8F, 484M	20-55 M=30.38	Spain	Psychological Capital Questionnaire (Luthans et al., 2007)
65d	Hernandez-Varas et al., 2019	optimism	.390	492	Spanish military staff	8F, 484M	20-55 M=30.38	Spain	Psychological Capital Questionnaire (Luthans et al., 2007)
66	Horrell et al., 2022	locus of control	.330	363	Evangelical married females	363F	21-88 M=38.38	USA	The Locus of Control Scale (Rotter, 1966)
67a	Huang, 2017	self-efficacy	.610	304	university students	237F, 59M	M=21.10	Canada	General Self-Efficacy Scale (Schwarzer & Jerusalem, 2013)
67b	Huang, 2017	resiliency	.760	304	university students	237F, 59M	M=21.10	Canada	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
68	Inonescu, 2014	optimism	.620	74	emerging adults & adults	44F, 30M	M=31.90	Romania	The Life Orientation Test (Scheier et al., 1985)
69	Ishaq et al., 2018	self-esteem	.690	330	university hostels students	123F, 127M	18-30	Pakistan	The Rosenberg Self-Esteem Scale-Revised (Rosenberg, 1995)
70	Itani, 2022	self-esteem	.756	139	emerging adult and adult third culture kids	75F, 54M	18-54	United Arab Emirates	The Rosenberg Self-Esteem Scale (Rosenberg, 1989)
71	Jibeen & Khalid, 2010	sense of coherence	.490	308	Pakistani immigrants living in Canada	176F, 132M	25-50 M=35.8	Pakistan	The Orientation to Life Questionnaire (Antonovsky, 1979).

72a	Johnson, 2011	self-efficacy	.560	581	undergraduate students	452F, 129M	M=20.0	USA	The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
72b	Johnson, 2011	optimism	.590	581	undergraduate students	452F, 129M	M=20.0	USA	The Life Orientation Test-Revised (Scheier et al., 1995)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
72c	Johnson, 2011	resilience	.560	581	undergraduate students	452F, 129M	M=20.0	USA	The Resilience Scale (Wagnild & Young, 1993)
73	Jones, 2010	resilience	.405	110	Black men	110M	18-46+	USA	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
74	Joshanloo et al., 2021	self-control	.183	1310	Korean adults	665F, 645M	M=40.0 2	Korea	The Brief Self-Control Measure (Tangney et al., 2004)
75	Joshi, 2022	self-esteem	.670	188	Indian folk dance and Indian classical dancers	N/A	18-25	India	The Rosenberg Self-Esteem Scale (Rosenberg, 1989)
76	Kalaitzaki et al., 2020	resilience	.727	100	Greek elders	62F, 38M	60-92 M=74	Greece	The Brief Resilience Scale (Leontopoulou, 2006)
77	Karmakar & Bhattacharyya, 2022	self-esteem	.530	210	young adults	110F, 100M	20-35 M=27.9 1	India	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
78a	Kazemian Moghadam & Haroon Rashidi, 2020	hope	.500	123	nurses	105F, 18M	30-40	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
78b	Kazemian Moghadam & Haroon Rashidi, 2020	self-efficacy	.550	123	nurses	105F, 18M	30-40	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
78c	Kazemian Moghadam & Haroon Rashidi, 2020	optimism	.210	123	nurses	105F, 18M	30-40	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
78d	Kazemian Moghadam & Haroon Rashidi, 2020	resilience	.610	123	nurses	105F, 18M	30-40	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
79	Khosla, 2021	optimism	.375	120	residents of New Delhi, belonging to middle economic group	60F, 60M	18-65	India	The Life Orientation Test-Revised (Scheier et al., 1995)
80	Kilgour, 2004	hope	.588	238	undergraduate students	157F, 81M	18-51 M=21	USA	Hope Scale (Kilgour, 2004)
81	Kim, 2019	resilience	.606	184	nursing students	135F, 49M	M=20.9 9	Korea	The Interpersonal Reactivity Index (Shin et al., 2009)
82	Kim, 2022	resilience	.370	135	women workers in the service sector	135F	21-51 M=38.9 2	Korea	The Resilience Measurement Tool (Block & Kremen, 1996)
83a	Kim & Han, 2019	self-efficacy	.610	217	hospital nurses	N/A	M=33.8 1	South Korea	The Self-Efficacy Tool (Rigotti et al., 2008)
83b	Kim & Han, 2019	optimism	.490	217	hospital nurses	N/A	M=33.8 1	South Korea	The Life Orientation Test-Revised

									(Scheier et al., 1995)
84	Kim et al., 2022	self-efficacy	.640	112	home-visiting care workers for elderly during the Covid-19	107F, 5M	34-80 M=61.35	South Korea	The Self-Efficacy Scale (Sherer et al., 1982)
85a	Kim et al., 2020	hope	.640	224	university student athletes	137F, 87M	18+	USA	Psychological Capital Questionnaire (Luthans et al., 2007)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
85b	Kim et al., 2020	optimism	.790	224	university student athletes	137F, 87M	18+	USA	Psychological Capital Questionnaire (Luthans et al., 2007)
85c	Kim et al., 2020	resilience	.760	224	university student athletes	137F, 87M	18+	USA	Psychological Capital Questionnaire (Luthans et al., 2007)
85d	Kim et al., 2020	self-efficacy	.780	224	university student athletes	137F, 87M	18+	USA	Psychological Capital Questionnaire (Luthans et al., 2007)
86	Klainin-Yobas et al., 2016	self-efficacy	.440	630	undergraduate students	402F, 228M	M=19.56	Philippines	The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
87	Kocaman, 2019	hope	.498	448	emerging adults and adults	290F, 158M	20-50	Türkiye	The Integrative Hope Scale (Woopman et al., 2011)
88	Kocayörük et al., 2018	hope	.650	287	university students	204F, 83M	18-58 M=26.48	Türkiye	Ontological Well-Being Scale (The Subscale of Hope; Şimşek & Kocayörük, 2013)
89	Kordan et al., 2019	resilience	.780	163	cancer patients	104F, 59M	18+	Iran	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
90	Krok, 2020	sense of coherence	.680	176	coronary heart disease patients	82F, 94M	M=58.56	Poland	The Sense of Coherence Scale (Antonovsky, 1993)
91	Krok, 2022	hope	.210	176	Anglicans	89F, 87M	20-76 M=32.06	UK	The Basic Hope Inventory (Trzebiński & Zięba, 2004)
92a	Krok & Kleszczewsk a-Albanska, 2019	sense of coherence	.690	176	cardiac patients	82F, 94M	45-82 M=58.56	Poland	The Sense of Coherence Scale (Antonovsky 1993)
92b	Krok & Kleszczewsk a-Albinska, 2019	self-efficacy	.570	176	cardiac patients	82F, 94M	45-82 M=58.56	Poland	The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
93	Krok and Zarzycka, 2020	self-efficacy	.560	150	cardiac patients	73F, 83M	47-82 M=58.82	Poland	The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
94	Kryazh, 2019	resilience	.740	156	university students and psychologists	143F, 13M	18-40	Ukraine and Belarus	Hardiness Test (Osin & Rasskazova, 2013)
95	Lal & Arya, 2017	sense of coherence	.702	50	medical and engineering students	N/A	20-30	India	The Sense of Coherence Scale (Antonovsky, 1987)

96	Lammel, 2003	sense of coherence	.699	83	traumatic brain injury survivors	46F, 37M	18-64 M=40	USA	The Sense of Coherence Scale (Antonovsky, 1987)
97	Lee, 2022	self-esteem	.710	236	university students and adults	103F, 133M	M=25.8	South Korea	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
98a	Lee et al., 2014	self-esteem	.790	502	undergraduate students	301F, 201M	M=21.13	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
98b	Lee et al., 2014	self-esteem	.630	518	undergraduate students	324F, 194M	M=22.35	Korea	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
99	Lee & Seo, 2019	resiliency	.510	282	nursing students	246F, 36M	M=22.29	Korea	The Resilience Scale (Yang, 2015)
100a	Malekitabar et al., 2017	self-efficacy	.389	116	high school principles	46F, 70M	22-55 M=42	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
100b	Malekitabar et al., 2017	hope	.372	116	high school principles	46F, 70M	22-55 M=42	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
100c	Malekitabar et al., 2017	resilience	.045	116	high school principles	46F, 70M	22-55 M=42	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
100d	Malekitabar et al., 2017	optimism	.446	116	high school principles	46F, 70M	22-55 M=42	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
101	Malinauskas and Dumciene, 2017	self-esteem	.155	197	students across the transition between secondary school and university	115F, 82M	M=18.54	Lithuania	The Rosenberg Self-Esteem Scale (Rosenberg, 1989)
102	Margaça et al., 2021	resilience	-.005	644	university students	444F, 200M	18-64 M=25	Portugal	Psychological Resilience Questionnaire (Margaça, 2021)
103	Masood et al., 2022	hope	.090	300	mothers of children with hearing impairment	300F	35-50 M=38.72	Pakistan	Adult Hope Scale (Snyder & Harris, 1991)
104a	Matud et al., 2022	self-esteem	.690	995	emerging adults	995F	18-29 M=22.65	Spain	York Self-Esteem Inventory (Rector, 1995)
104b	Matud et al., 2022	self-esteem	.730	995	emerging adults	995M	18-29 M=22.92	Spain	York Self-Esteem Inventory (Rector, 1995)
105a	Millear, 2013	optimism	.515	417	university alumni and administrative employees of a large hospital	324F, 93M	19-66	Australia	The Life Orientation Test-Revised (Scheier et al., 1994)
105b	Millear, 2013	self-efficacy	.641	417	university alumni and administrative employees of a large hospital	324F, 93M	19-66	Australia	The Coping Self-Efficacy Scale (Chesney et al., 2003)
106a	Min Kim & Han, 2019	self-efficacy	.610	220	nurses	N/A	M=33.81	South Korea	Self-Efficacy Tool (Rigotti et al., 2008)

106b	Min Kim & Han, 2019	optimism	.490	220	nurses	N/A	M=33.81	South Korea	The Life Orientation Test-Revised (Scheier et al., 1994)
107a	Mock, 2005	optimism	.480	52	caregivers	37F, 15M	M=55.94	USA	The Life Orientation Test-Revised (Scheier et al., 1994)
107b	Mock, 2005	optimism	.730	52	ALS patients	19F, 33M	M=58.28	USA	The Life Orientation Test-Revised (Scheier et al., 1994)
108	Mohapatra et al., 2020	self-esteem	.610	264	middle-level managers	112F, 152M	21-60+	India	The Rosenberg Self-Esteem Scale (Rosenberg, 1989)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
109a	Muench, 2003	hope	.330	265	individuals diagnosed with fibromyalgia syndrome and/or chronic fatigue immune dysfunction syndrome	250F, 15M	20-80	USA	Burn's Hopefulness Scale (Burn, 1997)
109b	Muench, 2003	hope	.220	265	individuals diagnosed with fibromyalgia syndrome and/or chronic fatigue immune dysfunction syndrome	250F, 15M	20-80	USA	The Herth Hope Scale (Herth, 1997)
110	Nath & Kumar-Pradhan, 2012	resilience	.327	146	university students	38F, 108M	17-32 M=22.93	India	Ego Resiliency Scale (Block and Kremen, 1996)
111	Neufeld & Malin, 2019	resilience	.600	160	medical students	93F, 67M	M=25.80	Canada	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
112a	Noori et al., 2016	self-esteem	.710	200	brain tumor patients	120F, 125M	19-76 M=42.16	Iran	Cooper Smith's Self-Esteem Inventory (1967)
112b	Noori et al., 2016	self-efficacy	.570	200	brain tumor patients	120F, 125M	19-76 M=42.16	Iran	The Sherer Self-Efficacy Questionnaire (Sherer et al., 1982)
112c	Noori et al., 2016	resilience	.350	200	brain tumor patients	120F, 125M	19-76 M=42.16	Iran	Ahvaz Psychological Hardiness Questionnaire (1998)
113	Novak & El-Ari, 2023	resilience	.699	223	adults with multiple sclerosis	178F, 45M	20-73 M=41.70	Israel	Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
114	Nwankwo et al., 2015	self-esteem	.745	350	student athletes	50F, 300M	18-30 M=24.0	Nigeria	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
115	Ok, 2009	self-esteem	.500	178	Muslim clergy and clergy trainees	86F, 92M	18-52	Türkiye	Texas Social Behavior Inventory (Helmreich & Stapp, 1974)
116	Okpako et al., 2021	resilience	.410	107	unemployed distinction graduates	N/A	N/A	Nigeria	The Brief Resilience Scale (Smith et al., 2008)
117	Ooi et al., 2021	self-esteem	.730	355	postgraduate students	N/A	N/A	Malaysia	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
118	Pidgeon & Keye, 2014	resilience	.680	141	university students	N/A	N/A	Australia	The Connor Davidson-Resilience Scale

(Connor & Davidson, 2003)									
119a	Pierce et al., 2016	self-esteem	.750	374	staff and faculty members of a university	243F, 131M	45-50	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
119b	Pierce et al., 2016	self-esteem	.750	108	full-time working adults	81F, 27M	41-45	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
120a	Popovych et al., 2023	resilience	.245	98	sportsmen under lockdown in Covid-19	45F, 53M	M=22.78	Ukraine	The Brief Resilience Scale (Smith et al., 2008)
120b	Popovych et al., 2023	resilience	.186	98	sportsmen under marital law in Covid-19	45F, 53M	M=22.78	Ukraine	The Brief Resilience Scale (Smith et al., 2008)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
121a	Pozo et al., 2014	sense of coherence	.767	59	mothers of children with autism spectrum disorder	59F	28-68 M=44.60	Spain	The Sense of Coherence Scale (Antonovsky, 1987)
121b	Pozo et al., 2014	sense of coherence	.748	59	fathers of children with autism spectrum disorder	59M	32-72 M=46.70	Spain	The Sense of Coherence Scale (Antonovsky, 1987)
122	Qi et al., 2022	hope	.730	332	university students	183F, 149M	18-25 M=22.16	China	The Life Orientation Test-Revised (Scheier et al., 1994)
123	Rehman et al., 2021	self-esteem	.620	478	university students	478M	M=19.20	China	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
124	Reis et al., 2019	self-esteem	.840	172	men athletes	172M	M=22.80	Canada	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
125	Reul Kim et al., 2019	resilience	.695	310	clinical nurses	309F, 1M	20+ M=34.10	South Korea	The Dispositional Resilience Scale-15 (Bartone, 1995)
126	Richardson, 2020	self-esteem	.840	524	LGB and heterosexual adults	261F, 263M	21-35	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
127a	Roberts, 2007	self-efficacy	.364	180	emerging adults within the military (civilian college)	108 F, 72M	19-22 M=20.45	USA	The Self-Efficacy Scale (Sherer et al., 1982)
127b	Roberts, 2007	self-efficacy	.329	180	young adults within the military (civilian employed)	114F, 66M	19-22 M=20.86	USA	The Self-Efficacy Scale (Sherer et al., 1982)
127c	Roberts, 2007	self-efficacy	.513	180	young adults within the military (military college)	85F, 95M	19-22 M=20.04	USA	The Self-Efficacy Scale (Sherer et al., 1982)
127d	Roberts, 2007	self-efficacy	.538	180	young adults within the military (military employed)	75F, 105M	19-22 M=20.46	USA	The Self-Efficacy Scale (Sherer et al., 1982)
128a	Roohi et al., 2019	self-efficacy	.575	285	university students	143F, 142M	M=24.0	Iran	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)
128b	Roohi et al., 2019	resilience	.672	285	university students	143F, 142M	M=24.0	Iran	The General Self-Efficacy Scale (Schouet & Jeroussalem, 2010)
129	Salama, 2014	self-esteem	.630	75	Arab American adults	45F, 29M	18-72 M=24.37	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

130	Sandıkçı, 2014	self-efficacy	.445	309	university students	227F, 82M	18-22+	Türkiye	The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1981)
131a	Sangeetha & Umadevi, 2022	resilience	.929	195	chronically ill patients	78F, 117M	40-60	India	Nicholson McBride Resilience Questionnaire (McBride, 2010)
131b	Sangeetha & Umadevi, 2022	optimism	.898	195	chronically ill patients	78F, 117M	40-60	India	The Life Orientation Test-Revised (Scheier et al., 1994)
132	Santos et al., 2023	hope	.770	110	adults during Covid-19	94F, 16M	18-76 M=35.71	Portugal	The Adult Hope Scale (Snyder et al., 1991)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
133	Santaş, 2019	self-efficacy	.411	209	classroom teacher candidates	169F, 40M	19-23+ M=20.89	Türkiye	Self-Efficacy Belief Scale (Özdemir, 2008)
134	Schivinski et al., 2020	self-esteem	.780	584	social media users	396F, 188M	M=32.28	Australia, UK, Germany	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
135	Schlechter et al., 2022	self-efficacy	.530	596	emerging adults and adults	441F, 155M	M=24.83	Germany	The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)
136	Schlechter et al., 2023	self-esteem	.780	1112	emerging adults and adults	479F, 621M	17+ M=28.7	UK and Germany	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
137	Schmieder et al., 2023	self-efficacy	.320	207	university students	176F, 30M	18-30+	Germany	The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1999)
138	Shaikh et al., 2023	resilience	.402	202	university students	131F, 71M	18-25	India	The Brief Resilience Scale (Smith et al., 2008)
139b	Shakarami et al., 2014	resilience	.350	377	university students	N/A	18-39 M=21.94	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
139c	Shakarami et al., 2014	optimism	.430	377	university students	N/A	18-39 M=21.94	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
139d	Shakarami et al., 2014	self-efficacy	.500	377	university students	N/A	18-39 M=21.94	Iran	Psychological Capital Questionnaire (Luthans et al., 2007)
139e	Shakarami et al., 2014	self-control	.580	377	university students	N/A	18-39 M=21.94	Iran	Kobasa's Personal Views Survey Questionnaire / Control Subscale (Kobasa et al., 1997)
140	Shakespeare-Finch et al., 2015	self-efficacy	.600	60	emergency medical dispatchers	41F, 19M	22-45+	Australia	The New General Self Efficacy Scale (Chen et al., 2001)
141	Sharifi & Moltafet, 2021	self-esteem	.600	360	university students	238F, 122M	18-39 M=21.0	Iran	The Heatherton & Polivy Self-esteem Scale (Heatherton & Polivy, 1991)
142a	Sharma & Sharma, 2019	hope	.430	300	university students	N/A	20-25	India	The Adult Hope Scale (Snyder et al., 1991)
142b	Sharma & Sharma, 2019	self-efficacy	.450	300	university students	N/A	20-25	India	The General Self-Efficacy Scale

									(Ralf & Matthias, 1995)
142c	Sharma & Sharma, 2019	resilience	.520	300	university students	N/A	20-25	India	The Resilience Scale-14 (Wagnild, 2009)
142d	Sharma & Sharma, 2019	optimism	.480	300	university students	N/A	20-25	India	The Life Orientation Test-Revised (Scheier et al., 1994)
143a	Siqi, 2017	self-esteem	.760	296	university students	237F, 59M	M=21.10	Canada	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
143b	Siqi, 2017	self-efficacy	.610	296	university students	237F, 59M	M=21.10	Canada	The General Self-Efficacy Scale (Schwarzer & Jerusalem, 2013)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	<i>r</i>	<i>N</i>	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
144	Sobhani et al., 2020	self-esteem	.200	100	patients that underwent bariatric surgery	85F, 15M	M=37.65	Iran	The General Self-Efficacy Questionnaire (Sherer & Maddux, 1982)
145	Soucase et al., 2023	self-esteem	.590	349	university students	224F, 125M	18-26 M=20.81	Spain	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
146a	Souri & Hasanirad, 2011	resilience	.520	414	students of medicine	191F, 213M	N/A	Iran	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)
146b	Souri & Hasanirad, 2011	optimism	.450	414	students of medicine	191F, 213M	N/A	Iran	The Life Orientation Test-Revised (Scheier et al., 1994)
147	Soylu & Uçanok, 2023	self-esteem	.666	125	medical oncology outpatients	125F	40-65	Türkiye	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
148	Srivastava & Kapoor, 2021	self-control	.680	210	middle level managers	98F, 112M	20-60	India	Locus of Control Scale (Pareek, 2002)
149	Stein et al., 2016	self-esteem	.650	326	university students	203F, 123M	N/A	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
150a	Stewart & Townley, 2019	optimism	.516	100	youth experiencing homelessness	32F, 68M	18-25	USA	The Life Orientation Test-Revised (Scheier et al., 1994)
150b	Stewart & Townley, 2019	self-esteem	.718	100	youth experiencing homelessness	32F, 68M	18-25	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
151	Swaran-Lata, 2020	optimism	.377	177	middle-aged adults	90F, 87M	40-60	India	The Life Orientation Test-Revised (Scheier et al., 1994)
152	Tamba & Iancu, 2023	self-esteem	.666	147	emerging adults	102F, 45M	18-25	Romania	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
153a	Tiittanen, 2014	sense of coherence	.710	117	women	256F	20-68 M=40.8	Sweden	The Sense of Coherence Scale (Antonovsky, 1987)
153b	Tiittanen, 2014	sense of coherence	.650	256	men	134M	20-68 M=40.8	Sweden	The Sense of Coherence Scale (Antonovsky, 1987)
154	Toor & Ofori, 2009	self-esteem	.440	32	leaders in construction sector	5F, 27M	M=42.5	Singapore	Contingent Self-Esteem Scale (Paradise & Kemis, 1999)

155a	Tripathi, 2011	self-efficacy	.344	37	male employees in insurance sector	37M	M=44.94	India	Psychological Capital Questionnaire (Luthans et al., 2007)
155b	Tripathi, 2011	hope	.018	37	male employees in insurance sector	37M	M=44.94	India	Psychological Capital Questionnaire (Luthans et al., 2007)
155c	Tripathi, 2011	optimism	-.158	37	male employees in insurance sector	37M	M=44.94	India	Psychological Capital Questionnaire (Luthans et al., 2007)
155d	Tripathi, 2011	resilience	.545	37	male employees in insurance sector	37M	M=44.94	India	Psychological Capital Questionnaire (Luthans et al., 2007)

Appendix D (continued)

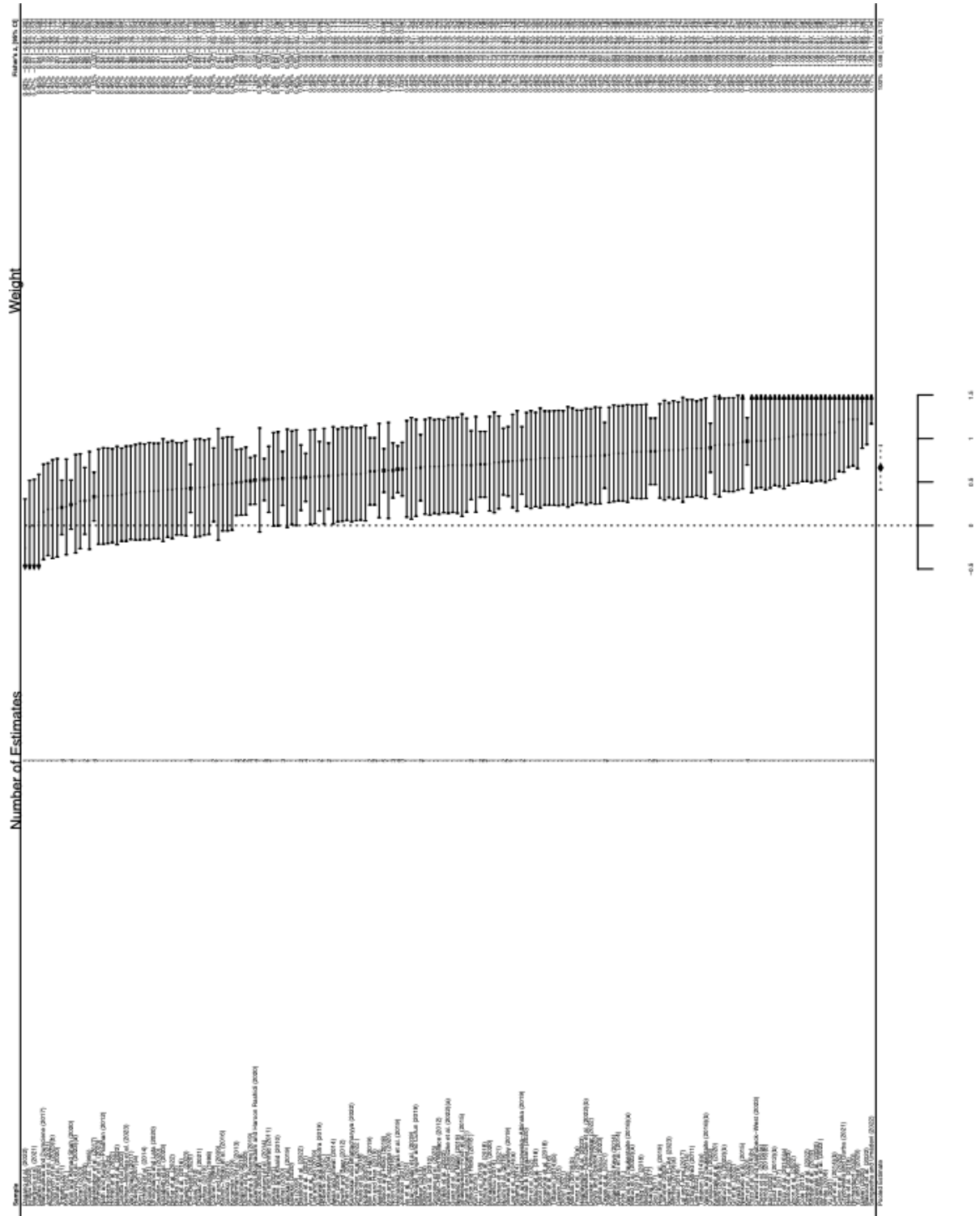
#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
156	Usta, 2013	hope	.690	366	university students	240F, 126M	M=20.81	Türkiye	The Integrative Hope Scale (Schrang et al., 2011)
157	Üzar-Özçetin et al., 2019	resilience	.576	66	oncology nurses	58F, 8M	24-47 M=31.24	Türkiye	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)
158a	Vainio & Daukentaite, 2016	sense of coherence	.680	117	university students	117M	M=26.04	Sweeden	The Sense of Coherence Scale (Antonovsky, 1987)
158b	Vainio & Daukentaite, 2016	sense of coherence	.710	76	university students	76F	M=26.04	Sweeden	The Sense of Coherence Scale (Antonovsky, 1987)
159	Valickas et al., 2019	optimism	.495	105	university students	76F, 29M	18-48 M=25.60	Lithuania	Planned Happenstance Career Inventory Optimism Subscale (Kim et al., 2014)
160	Van Schaick, 2011	resilience	.360	431	university students	260F, 132M, 39 Unidentified	18-21 M=18.11	USA	The Resilience Scale (Wagnild, 2009)
161	Voon et al., 2022	resilience	.772	408	counselors	299F, 109M	24-70 M=35.48	Malaysia	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)
162a	Waterman et al., 2013	self-control	.240	9650	university students	6756F, 2504M	M=20.40	USA	Rotter's Locus of Control Scale (Rotter, 1969)
162b	Waterman et al., 2013	self-esteem	.630	9650	university students	6756F, 2504M	M=20.40	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1986)
163	Watson et al., 2018	resilience	.640	304	self-identified bisexual women	253 Cisgender, 21 Questioning, 20 Gender nonconforming, 18 Gender queer	18+	USA	Brief Resilience Scale (Smith et al., 2008)

						18 Gender fluid 6 Nonbinary transgender 5 agender 2 bigender			
164	Wetzel, 2007	self-esteem	.692	186	undergraduate students	144F, 42M	M=27.13	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
165	White, 2008	self-esteem	.780	303	black university students	246F, 56M	18-26+	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)
166a	Xuhua He et al., 2018	resilience	.640	538	university students	458F, 80M	18-57 M=36.23	Australia	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)

Appendix D (continued)

#	Author(s), Year	Type of Personal Resource	r	N	Sample Characteristics	Gender Distribution	Age Range and/or Mean	Country of Origin	Scales Used
166b	Xuhua He et al., 2018	self-efficacy	.570	538	university students	458F, 80M	18-57 M=36.23	Australia	The General Self Efficacy Scale (Schwarzer & Jerusalem, 1995)
167	Yu, 2021	resilience	.788	207	immigrants	169F, 36M, 2Non-binary	18-75 M=33.59	USA	The Connor Davidson-Resilience Scale (Connor & Davidson, 2003)
168	Yu & Chae, 2020	resilience	.840	97	medical students	36F, 61M	N/A	Korea	The Korean Resilience Quotient-53 (Reivich & Shatté, 2002)
169a	Zayas et al., 2021	optimism	.652	566	emerging adults and adults during confinement in Covid-19	416F, 150M	18+ M=40.20	Spain	The Life Orientation Test-Revised (Scheier et al., 1994)
169b	Zayas et al., 2021	resilience	.683	566	emerging adults and adults during confinement in Covid-19	416F, 150M	18+ M=40.20	Spain	Wagnild and Young Resilience Scale (Wagnild & Young, 1993)
170	Zeigler-Hill & Wallace, 2012	self-esteem	.590	183	undergraduate students	121F, 62M	M=19.78	USA	The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

E. FOREST PLOT



F. SCALES OF PSYCHOLOGICAL WELL-BEING

Please indicate after each statement the number that best corresponds to your feelings.

1 = strongly disagree

2 = moderately disagree

3 = slightly disagree

4 = slightly agree

5 = moderately agree

6 = strongly agree

Autonomy Scale

1. Sometimes I change the way I act or think to be more like those around me. _____

2. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people. _____

3. My decisions are not usually influenced by what everyone else is doing. _____

4. I tend to worry about what other people think of me. _____

5. Being happy with myself is more important to me than having others approve of me. _____

6. I tend to be influenced by people with strong opinions. _____

7. People rarely talk me into doing things I don't want to do. _____

8. It is more important to me to "fit in" with others than to stand alone on my principles. _____

9. I have confidence in my opinions, even if they are contrary to the general consensus. _____

10. It's difficult for me to voice my own opinions on controversial matters. _____

11. I often change my mind about decisions if my friends or family disagree. _____

12. I am not the kind of person who gives in to social pressures to think or act in certain ways. _____

13. I am concerned about how other people evaluate the choices I have made in my

life. _____

14. I judge myself by what I think is important, not by the values of what others think is important. _____

Environmental Mastery Scale

1. In general, I feel I am in charge of the situation in which I live. _____

2. The demands of everyday life often get me down. _____

3. I do not fit very well with the people and the community around me. _____

4. I am quite good at managing the many responsibilities of my daily life. _____

5. I often feel overwhelmed by my responsibilities. _____

6. If I were unhappy with my living situation, I would take effective steps to change it. _____

7. I generally do a good job of taking care of my personal finances and affairs. _____

8. I find it stressful that I can't keep up with all of the things I have to do each day. _____

9. I am good at juggling my time so that I can fit everything in that needs to get done. _____

10. My daily life is busy, but I derive a sense of satisfaction from keeping up with everything. _____

11. I get frustrated when trying to plan my daily activities because I never accomplish the things I set out to do. _____

12. My efforts to find the kinds of activities and relationships that I need have been quite successful. _____

13. I have difficulty arranging my life in a way that is satisfying to me. _____

14. I have been able to build a home and a lifestyle for myself that is much to my liking. _____

Personal Growth Scale

1. I am not interested in activities that will expand my horizons. _____

2. In general, I feel that I continue to learn more about myself as time goes by. _____

3. I am the kind of person who likes to give new things a try. _____

4. I don't want to try new ways of doing things—my like is fine the way it is. _____
5. I think it is important to have new experiences that challenge how you think about yourself and the world. _____
6. When I think about it, I haven't really improved much as a person over the years. _____
7. In my view, people of every age are able to continue growing and developing. _____
8. With time, I have gained a lot of insight about life that has made me a stronger, more capable person. _____
9. I have the sense that I have developed a lot as a person over time. _____
10. I do not enjoy being in new situations that require me to change my old familiar ways of doing things. _____
11. For me, life has been a continuous process of learning, changing, and growth. _____
12. I enjoy seeing how my views have changed and matured over the years. _____
13. I gave up trying to make big improvements or changes in my life a long time ago. _____
14. There is truth to the saying you can't reach an old dog new tricks. _____

Positive Relations with Others Scale

1. Most people see me as loving and affectionate. _____
2. Maintaining close relationships has been difficult and frustrating for me. _____
3. I often feel lonely because I have few close friends with whom to share my concerns. _____
4. I enjoy personal and mutual conversations with family members or friends. _____
5. It is important to me to be a good listener when close friends talk to me about their problems. _____
6. I don't have many people who want to listen when I need to talk. _____
7. I feel like I get a lot out of my friendships. _____
8. It seems to me that most other people have more friends than I do. _____
9. People would describe me as a giving person, willing to share my time with others. _____
10. I have not experienced many warm and trusting relationships with others. _____
11. I often feel like I'm on the outside looking in when it comes to friendships. _____
12. I know that I can trust my friends, and they know they can trust me. _____

13. I find it difficult to really open up when I talk with others. _____
14. My friends and I sympathize with each other's problems. _____

Purpose in Life Scale

1. I feel good when I think of what I've done in the past and what I hope to do in the future. _____
2. I live life one day at a time and don't really think about the future. _____
3. I tend to focus on the present, because the future nearly always brings me problems. _____
4. I have a sense of direction and purpose in life. _____
5. My daily activities often seem trivial and unimportant to me. _____
6. I don't have a good sense of what it is I'm trying to accomplish in life. _____
7. I used to set goals for myself but that now seems like a waste of time. _____
8. I enjoy making plans for the future and working to make them a reality. _____
9. I am an active person in carrying out the plans I set for myself. _____
10. Some people wander aimlessly through life, but I am not one of them. _____
11. I sometimes feel as if I've done all there is to do in life. _____
12. My aims in life have been more a source of satisfaction than frustration to me. _____
13. I find it satisfying to think about what I have accomplished in life. _____
14. In the final analysis, I'm not so sure that my life adds up to much. _____

Self-Acceptance Scale

1. When I look at the story of my life, I am pleased with how things have turned out. _____
2. In general, I feel confident and positive about myself. _____
3. I feel like many of the people I know have gotten more out of life than I have. _____
4. Given the opportunity, there are many things about myself that I would change. _____
5. I like most aspects of my personality. _____
6. I made some mistakes in the past, but I feel that all in all everything has worked out for the best. _____

7. In many ways, I feel disappointed about my achievements in life. _____
8. For the most part, I am proud of who I am and the life I lead. _____
9. I envy many people for the lives they lead. _____
10. My attitude about myself is probably not as positive as most people feel about themselves. _____
11. Many days I wake up feeling discouraged about how I have lived my life. _____
12. The past had its ups and downs, but in general, I wouldn't want to change it. _____
13. When I compare myself to friends and acquaintances, it makes me feel good about who I am. _____
14. Everyone has their weaknesses, but I seem to have more than my share. ____



G. EXAMPLES OF STRATEGIES FOR INCREASING PSYCHOLOGICAL WELL-BEING THROUGH KEY INDIVIDUAL PSYCHOLOGICAL RESOURCES

There are hundreds of prevention and intervention studies and recommended practices to foster key individual psychological resources. “Transforming Lives through Resilience Education” is 4 two-hour classroom sessions designed for students in transition to college life in the context of a resilience curriculum that focuses on introducing the resilience model, taking responsibility for one’s own behaviors, changing disempowering interpretations or thinking into empowering interpretations using a simple ABCDE thinking model and increasing the awareness of the importance of connecting with others. The effectiveness of this curriculum on resilience scores of the participants was shown by Steinhardt and Dolbier (2008). Such a resilience curriculum can be integrated into the first-year courses or orientation programs of the universities delivered by mental health professionals. Stress-management prevention and intervention studies including relaxation techniques, meditation, cognitive restructuring, coping strategies, and problem-solving (e.g., Arnetz et al., 2009; Cigrang et al., 2000; Gardner et al., 2005; Grime, 2004) were also shown as significant resilience-boosting factors. Other studies aiming to empower participants’ skills on acceptance of undesirable feelings and thoughts, cognitive flexibility, mindfulness, self-compassion, and self-regulation skills (e.g., Pidgeon et al., 2013) have been empirically tested and proved to be significant contributors to resilience. These kinds of programs can be regularly delivered by institutions through insourcing or outsourcing services.

To continue with optimism, regular daily practice to count down/list and contemplate/imagine three positive things waiting for you the next day (Littman-Ovadia & Nir, 2014); “Best Possible Self” intervention by writing, reflecting on, and imagining your life when everything has worked out perfectly and you have attained all of your life’s goals (Peters et al., 2013); positively reframing life events, review of

positive past life events, review of favorable events at the end of the day (Mohammadi et al., 2018); regular physical exercise (Borges-Cosic et al., 2015); positive thinking skills program (think before you sink, challenging situations and thinking the worst, helpful and unhelpful thinking, etc.) (Johnstone et al., 2014) are empirically validated examples of effective strategies on how to increase optimism levels of individuals. These skills and activities can be used in counseling sessions (both individual and group-based), psychoeducation programs, and even in courses designed to promote the psychological well-being of participants (e.g., university students).

Self-control has been shown to increase by teaching mindfulness practices and meditation (Liu et al., 2022; Singh et al., 2003; Yang et al., 2018); doing behavioral analysis, goal setting, self-monitoring, and reward, cognitive correction activities, coping skills training, and self-reflection (Stieger et al., 2023; Yang et al., 2018). Regarding hope, the HOPE-IN program covers goals like strengthening beliefs in oneself and in one's ability to handle one's feelings about the future, strengthening the feeling that there is a way out of difficulty and that a positive outcome is possible (Rustøen et al., 2011), and another example is the HOPE intervention program comprising a combination of relaxation exercises, positive psychology techniques, and cognitive-behavioral exercises (Tay et al., 2022).

Setting achievable and realistic goals, working on self-regulation tasks, dealing with relapses, cognitive restructuring (Buckley, 2016); an intervention program based on Bandura's four elements of self-efficacy theory as vicarious learning, performance accomplishments, social persuasion and anxiety management (Betz & Schifano, 2000); remembering past mastery experiences, gaining awareness on how interpretations of failure and successes affect self-efficacy, identifying barriers that hinder strong self-efficacy beliefs, focusing on positive thoughts and learning how to increase them (Cieslak et al., 2016); and taking constructive feedback on performance (Schwoerer et al., 2005) were found as significant tools to foster self-efficacy. In this sense, faculty members and managers can be trained to give constructive feedback on the performance of their students and employees.

Regarding self-esteem, assertiveness training (Ramadhan et al., 2018); teaching active coping strategies, working on worries, exploring the places and people

that give a sense of security, searching for the answers to the question of “Who am I?”, setting and monitoring goals, writing yourself a letter about your qualities and accomplishments as well as strengths and weaknesses (Borras et al., 2009), cognitive reframing, motivational techniques, behavior activation, ways to improve communication skills, setting boundaries, approaching others, mindfulness, relaxation techniques, modification of cognitive biases and dysfunctional beliefs (Bruhns et al., 2021) are some of the effective strategies to increase self-esteem levels of individuals.

Lastly, for a sense of coherence, increasing awareness of one’s own potentials, both external and internal resources, and the ability to use them (Yamazaki et al., 2011); physical activity (Thompson et al., 2021); experiential learning (Schreuder et al., 2014); mindfulness (Humboldt & Lean, 2013); relaxation techniques (Mowla et al., 2020); gratitude exercises like daily diary by writing about the things you are grateful and positive reframing (Lambert et al., 2009); healthy nutrition (Veenstra et al., 2005); mindfulness-based stress reduction training (Weissbecker et al., 2002); better working conditions and benefits (Roskams & Haynes, 2020) can be utilized to support sense of coherence of individuals.

Most adults and young adults spend at least half of their time at work which makes work a significant life domain. Dagenais-Desmarais and Savoie (2012) showed that feeling of competency at work, desire for involvement, thriving at work, and perceived recognition at work were indicators of psychological well-being at work. When delved into these indicators, it is easily seen that they are related to self-efficacy, self-control, and self-esteem that can be encouraged on behalf of employees by good leadership practices. These in turn may contribute to their resilience, hope, and optimism levels as well. In a comprehensive review of health and well-being in the workplace (Danna & Griffin, 1999), role ambiguity and role conflict were stated as major sources of potential stress. These two factors may decrease the self-control and self-esteem of employees, which directly have a negative impact on their psychological well-being. Hence, creating safe and empowering work settings with a concern for the well-being of workers should be one of the major focuses of authorities with effective management skills.

H. TURKISH SUMMARY / TRKE ZET

TEMEL BİREYSEL PSİKOLOJİK KAYNAKLARIN PSİKOLOJİK İYİOLUŞ İLE İLİŞKİSİ: BİR META-ANALİZ ÇALIŞMASI

1. GİRİŞ

İyi bir hayat nasıl yaşanır ya da iyi yaşanmış bir hayat ne anlama gelir? Sonja Lyubomirsky'e göre (2001) pozitif psikolojinin temel amacı, bu soruya yanıt(lar) aramak olmalıdır. Aslında tarih boyunca pek çok felsefeci, mutluluğun insan davranışının altında yatan temel motivasyon olduğunu savunmuştur. Ancak ana akım psikolojide psikolojik sağlığın temel göstergelerine yönelik bilimsel çabalar depresyon, kaygı, bağımlılık, şiddet gibi olumsuz duygu, düşünce ve davranışların varlığı veya yokluğuna odaklanmıştır (Diener, 1984; Ryan ve Deci, 2001; Ryff, 1995; Zhang ve Chen, 2019). Bu gelenek uzun yıllar boyunca devam etmiş, hâlâ da hüküm sürmeye devam eden bir yaklaşımdır. Dolayısıyla insanın psikolojik sağlığına ilişkin potansiyeli, iyilik hali ve bunları etkileyen koruyucu faktörler uzun bir süre göz ardı edilmiştir (Ryff ve Singer, 1996).

Pozitif psikoloji ekolünün ortaya çıkışı (Seligman ve Csikszentmihalyi 2000) ve Dünya Sağlık Örgütü'nün (2001) "sağlık" tanımını "hastalığın olmayışı durumu"ndan "tam bir fiziksel, ruhsal ve sosyal iyilik hali" tanımına çevirmesi sayesinde insan ruh sağlığına dair olumlu değişkenlerin (ör. mutluluk, iyi oluş, iyimserlik, tatmin olma vb.) bilimsel camiada ele alınışı hızlı bir ivme göstermiştir. Böylelikle, sağlıklı olma haline ilişkin paradigma değişimi gerçekleşmiş ve insanın sahip olduğu güçlü yönler ve kaynaklar gerek bilimsel araştırmada gerek uygulamada bir hayli yaygınlaşmıştır.

İyi oluş kavramı fiziksel, sosyal ve psikolojik olmak üzere üç boyutta ele alınan ve her bir boyutun birbiri ile ilişkili olduğu ve birbirini etkileyen boyutlar olduğu bilinmektedir. Psikolojik iyi oluş ile ilgili alanyazına bakıldığında, araştırmacıların

kavrama ilişkin birbirinden farklı tanımlama ve göstergeler kullandığı, üzerinde uzlaşmış bir psikolojik iyi oluş kavramsallaştırmasının olmadığı gözlenmiştir. Örneğin, pek çok araştırma psikolojik iyi oluş adı altında klinik semptomların varlığı ya da yokluğunu ele almış, katılımcıların sözkonusu semptomları ne denli taşıyıp taşımadıklarına göre onların psikolojik iyi oluş düzeylerini raporlamışlardır. Bir grup araştırma ise, öznel iyi oluşu psikolojik iyi oluş ile eşanlamlı olarak kullanmış, kimisi de yaşam doyumu ölçeği ile psikolojik iyi oluşu eşleştirmiştir. Halbuki öznel ve psikolojik iyi oluş birbirinden farklı, ancak ilişkili kavramlardır. Özetle, varolan kavram karmaşasına istinaden bu çalışmada psikolojik iyi oluş Ryff'in (1989a) geliştirdiği ve altı boyuttan (kendini kabul, diğerleri ile olumlu ilişkiler, özerklik, çevresel hâkimiyet, bireysel gelişim ve yaşam amacı) oluşan modele göre tanımlanmıştır.

Psikolojik iyi oluş anahtar kelimesi ile Google Akademik veritabanında yapılan aramada (22 Ağustos 2023 tarihinde), 2000-2023 yılları arasında yayımlanmış 21.300 çalışma belirmiştir. Bu çalışmaların yer aldığı 1132 sayfa teker teker incelenmiş ve psikolojik iyi oluş ile yapılan çalışmaların pek çoğunun bireysel/birey içi faktörleri (ör. psikolojik dayanıklılık, özşefkat, duygu düzenleme, kişilik özellikleri, umut, özsaygı vb.) içerdiği gözlenmiştir. Ayrıca, 1990-2023 yılları arasında kapsayan ve EBSCOHost, Web of Science, Proquest Tez Tarama, Google Akademik gibi veritabanlarında da detaylı bir tarama yapılmış ve özet kısmında “psikolojik iyi oluş” anahtar kelimesi geçen 80.000’i aşkın çalışmaya ulaşılmıştır (birebir kopyaları ile beraber). Bireysel çalışmaların çokluğuna rağmen psikolojik iyi oluş üzerine yapılan meta-analiz çalışmaları oldukça az sayıdadır.

Lopez ve arkadaşları (2006), psikolojik danışmanlığın bir yardım mesleği olmasının yanı sıra bireylerin kişisel ve sosyal kaynaklarını keşfetmesi ve güçlendirmesine yönelik profesyonel bir süreç olduğunu belirtmişlerdir. Bireylerdeki eksikleri ve sorunları odağa alan patoloji modeline kıyasla, psikolojik danışmanlık bireylerin potansiyelini ve güçlü yönlerini açığa çıkarmaya odaklanmıştır. Dolayısıyla, bireylerin psikolojik iyi oluşları ile ilişkili olabilecek psikolojik kaynakları gözden geçirmek ve var olan ampirik bulguların sistematik bir derlemesini yapmak psikolojik danışmanlığın temel amacına hizmet edecektir.

1.1. Araştırmanın Amacı

Bu meta-analiz çalışmasının üç amacı bulunmaktadır. Bunlardan ilki, temel bireysel psikolojik kaynaklar (psikolojik dayanıklılık, umut, iyimserlik, öz saygı, öz yeterlik, öz kontrol ve bütünlük hissi) ile psikolojik iyi oluş arasındaki ilişkinin boyutunu incelemektir. İkinci olarak, her bir temel bireysel psikolojik kaynağın psikolojik iyi oluş ile ilişkisini araştırmaktır. Son olarak, her iki amaç için etki büyüklükleri arasındaki heterojenliği anlamaya yönelik bir dizi düzenleyici değişken (çalışmanın yayımlanma tarihi, örneklem büyüklüğü, katılımcıların yaş grubu, katılımcıların köken ülkeleri, Psikolojik İyi Oluş Ölçeklerinin türü, temel bireysel psikolojik kaynakların ölçümünde kullanılan ölçeklerin kullanım sıklığı, Hofstede'nin altı boyuttan oluşan kültürel değerleri) analizinin yapılmasıdır.

1.2. Araştırmanın Soruları

Bu çalışmanın bağımlı değişkeni olan psikolojik iyi oluş, Ryff (1989a) tarafından geliştirilen ve toplam 6 boyuttan (kendini kabul, diğerleri ile olumlu ilişkiler, özerklik, çevresel hâkimiyet, bireysel gelişim ve yaşam amacı) oluşan modele dayalıdır. Araştırmada psikolojik iyi oluş değişkeni, modelin temel ölçüm aracı olan Psikolojik İyi Oluş Ölçekleri'nden alınan toplam puanın baz alındığı çalışmaları kapsamaktadır. Araştırmanın soruları aşağıda sıralanmıştır:

- 1) Temel bireysel psikolojik kaynakların bütünü ve her biri ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - a. Temel bireysel psikolojik kaynakların bütünü ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - b. Psikolojik sağlamlık ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - c. Umut ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - d. İyimserlik ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - e. Öz saygı ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - f. Öz yeterlik ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - g. Öz kontrol ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?
 - h. Bütünlük duygusu ile psikolojik iyi oluş arasında hangi düzeyde bir ilişki vardır?

2) Temel bireysel psikolojik kaynakların bütünü ve her biri ile psikolojik iyi oluş arasındaki ilişkiyi çalışmanın yayımlanma tarihi, örneklem büyüklüğü, katılımcıların yaş grubu, katılımcıların köken ülkeleri, Psikolojik İyi Oluş Ölçeklerinin türü, temel bireysel psikolojik kaynakların ölçümünde kullanılan ölçeklerin kullanım sıklığı ve Hofstede'nin altı boyuttan oluşan kültürel değerleri düzenlemekte midir?

- a. Söz konusu düzenleyici değişkenlerin temel bireysel psikolojik kaynakların tümü ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- b. Söz konusu düzenleyici değişkenlerin psikolojik sağlamlık ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- c. Söz konusu düzenleyici değişkenlerin umut ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- d. Söz konusu düzenleyici değişkenlerin iyimserlik ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- e. Söz konusu düzenleyici değişkenlerin öz saygı ve psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- f. Söz konusu düzenleyici değişkenlerin öz yeterlik ve psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- g. Söz konusu düzenleyici değişkenlerin öz kontrol ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?
- f. Söz konusu düzenleyici değişkenlerin bütünlük duygusu ile psikolojik iyi oluş arasındaki ilişkiyi düzenleyici rolü var mıdır?

1.3. Araştırmanın Önemi

Benzer araştırma problemlerine odaklanan bireysel çalışmaların geçerli ve güvenilir bir şekilde sentezlenmesine olan ihtiyaca alanyazında oldukça sık vurgu yapılmaktadır. Bireysel olarak yüzlerce çalışma olmasına rağmen çok nadir olarak tek bir çalışmanın önleyici, müdahale edici ve politikaya yön verici güçte olduğu gözlenmiştir. Ayrıca, var olan benzer çalışmaların organize edilmesi, neyin eksik, neye ihtiyaç olduğu ve neyin modası geçmiş olduğuna dair gelecek çalışmalara ışık tutabilecektir.

Dahası, meta-analiz çalışması, bir konudaki sonuçlara ilişkin (olumlu ya da olumsuz) büyük resmi görmek için çok etkili bir araçtır. Şimdiye kadar temel bireysel

psikolojik kaynaklar ile psikolojik iyi oluş arasındaki ilişki pek çok bireysel araştırmada incelenmiş, ancak bu ilişkilerin kuvvetine dair sorular henüz cevaplanmamıştır. Pozitif psikolojik değişkenlerin, pozitif psikolojinin bel kemiğini oluşturduğu gerçeğinden yola çıkılırsa, psikolojik kaynakların psikolojik iyi oluş ile ilişkisinin incelenmesinin alanyazın için bir ihtiyaç olduğu öne sürülebilir.

İnsanların ve toplumların psikolojik iyi oluşu, 2015 yılında Birleşmiş Milletler tarafından yayınlanan Sürdürülebilir Kalkınma Hedefleri raporunda yer alan 17 hedef arasına girmiştir. İnsan sağlığın tanımındaki değişimle birlikte bu gelişme, psikolojiyi bir nevi sadece yardıma ihtiyaç duyanlara değil, herkese hitap eden bir bilim dalı haline getirmiştir. İyi oluş halini destekleyici uygulamalar hem bireysel boyutta hem kurumsal boyutta dünya çapında bir gereklilik ve önem taşımaya başlamıştır. Ayrıca, hükümetler, şirketler ve akademi, politikalarını, uygulamalarını ve çalışmalarını, bu kalkınma hedefleri çerçevesinde güncellemeye ve geliştirmeye başlamışlardır. Dolayısıyla, psikolojik iyi oluşu desteklemeye yönelik ampirik bulgulara her zamankinden daha fazla ihtiyaç olduğu söylenebilir.

Bu meta-analiz çalışmasının sonuçları hem ruh sağlığı uzmanları hem de politika geliştiriciler için yetişkinlerin psikolojik iyi oluşlarını destekleme sürecinde ve temel bireysel psikolojik kaynaklar kapsamında iyi bir rehber olabilir. Torgerson (2003) önleyici, müdahale edici ve politika üretmeye katkı sağlayıcı tek bir bilimsel çalışmanın mümkün olamayacağını, bu amaçlar doğrultusunda derleme çalışmalarının çok temel bir işlevi olduğunu dile getirmiştir. Bu bağlamda, temel bireysel psikolojik kaynakların psikolojik iyi oluş ile ilişkisini, onlarca çalışmayı bir araya getirerek incelemek ve yapılacak düzenleyici değişken analizleri vasıtasıyla bu ilişkinin doğasına dair daha rafine sonuçlar elde etmek, psikolojik iyi oluşa ilişkin bilimsel birikimin gerçek yaşam ihtiyaçları ile bağlantısını güçlendirecektir.

2. YÖNTEM

2.1. Araştırmanın Deseni

Bu araştırmanın amacı temel bireysel psikolojik kaynaklar ile psikolojik iyi oluş arasındaki ilişkileri araştıran bireysel çalışmaların niceliksel olarak organize edilmesidir. Bu amaç doğrultusunda ilişkisel desen kullanılmış, verilerin analizinde meta-analiz istatistiksel yöntemi uygulanmıştır.

2.2. Araştırmanın Değişkenleri

Bu meta-analiz çalışmasının değişkenleri, psikolojik iyi oluş ve yedi temel bireysel psikolojik kaynaktan (psikolojik sağlamlık, umut, iyimserlik, öz saygı, öz yeterlik, öz kontrol ve bütünlük duygusu) oluşmaktadır. Psikolojik iyi oluş Ryff'in (1989a) geliştirdiği modele dayalı Psikolojik İyi Oluş Ölçekleri'nden alınan toplam puanı, temel bireysel psikolojik kaynaklar ise farklı ölçüm araçlarından alınan ve psikolojik kaynak bazındaki toplam puanları içermektedir.

2.3. Araştırmaya Dâhil Edilme Kıstasları

Çalışmaların meta-analize dâhil edilme sürecinde pek çok kıstas belirlenmiştir. Aşağıdaki tüm kıstasları karşılayan çalışmalar, meta-analizin örneklemini oluşturmaktadır:

- Nicel çalışmalar (yalnızca hakemli dergilerde yayımlanmış makaleler, yayımlanmış ya da yayımlanmamış yüksek lisans ve doktora tezleri)
- Yayın dili İngilizce ya da Türkçe tam metin çalışmalar
- 1990-2023 yılları arasında yapılmış çalışmalar
- Etki büyüklüğünün ya da etki büyüklüğünü hesaplayabilmek için gerekli olan istatistik değerlerin (korelasyon katsayıları) raporlandığı çalışmalar
- Herhangi bir temel bireysel psikolojik kaynak ile psikolojik iyi oluş toplam puanlarının arasındaki ilişkinin raporlandığı çalışmalar
- Psikolojik iyi oluşun Ryff (1989a) tarafından geliştirilen Psikolojik İyi Oluş Ölçekleri veya Ryff ve Keyes (1995) tarafından kısaltılan formu ile ölçüldüğü çalışmalar
- Araştırmanın katılımcıları arasında çocukların ve ergenlerin yer almaması
- Araştırmanın örnekleminin klinik popülasyondan seçilmemiş olması
- Araştırmadaki bağımlı ve bağımsız değişkenlerin toplam puan bazında ölçülmüş olması

Yukarıdakilere ek olarak, bir çalışmanın içinde aynı katılımcılarla bağımlı ve bağımsız değişkene ilişkin birden fazla etki büyüklüğü ya da korelasyon katsayısı raporlanmışsa, bunların ortalaması hesaplanmış ve meta-analize bu ortalama değer veri olarak girilmiştir.

2.4. Alanyazın Taramasının Temel Aşamaları

Ryff (1989a) psikolojik iyi oluş modelini ve ölçeklerini 1989 yılında yayımladığı için, bu meta-analiz çalışmasında 1990-2023 yıllarını kapsayan detaylı bir alanyazın araştırması yapılmıştır. Hedef çalışmaların belirlenmesinde EBSCOHost, Web of Science, Proquest, TR Dizin veritabanları kullanılmıştır. Ayrıca, YÖK Tez Tarama motoru ve Proquest Tezler olmak üzere iki tez havuzundan da faydalanılmıştır. Yayımlanan çalışmalarda gözden kaçırılanlar olmaması için Google Akademik web sayfası ve çalışmaların kaynakça kısımları da incelenmiştir. Bazı çalışmaların tam metinlerine Research Gate web sayfasından ulaşılmıştır.

Tam metinlerine ulaşılamayan ve/veya korelasyon katsayılarının alt ölçekler bazında yayımlandığı çalışmaların yazışmadan sorumlu yazarlarına elektronik ileti gönderilmiş, fakat maalesef yazarların belirttiği birtakım sebeplerle veya iletilere verilmeyen yanıtlardan dolayı tam metinlere ve/veya tam puan bazındaki korelasyon katsayısı bilgilerine ulaşılamamıştır.

2.5. Alanyazın Taramasının Sonuçları

Alanyazın taramasında aşağıdaki dört farklı arama stratejisi kullanılmıştır.

EBSCO veri tabanı için;

“psikolojik * iyi oluş” VEYA “iyi oluş” VEYA “ödomanik * iyi oluş” VEYA “ödomanik” VEYA “psikolojik * zindelik” VEYA “zindelik” (TÜM METİN)
VE “psikolojik * iyi oluş * ölçeği” VEYA “zindelik * ölçeği” (TÜM METİN)
VE “Ryff” VEYA “Keyes (TÜM METİN)
VE “öz saygı” VEYA “öz yeterlik” VEYA “psikolojik * sağlamlık” VEYA “umut”
VEYA “iyimserlik” VEYA “kontrol” VEYA “kontrol * odağı” VEYA “öz kontrol”
VEYA “psikolojik * sermaye” VEYA “temel * benlik * değerlendirmesi” VEYA
“kaynak” VEYA “dayanıklılık” VEYA “koruyucu * faktör”

Web of Science veri tabanı için;

“öz saygı” VEYA “öz yeterlik” VEYA “psikolojik * sağlamlık” VEYA “umut” VEYA
“iyimserlik” VEYA “kontrol” VEYA “kontrol * odağı” VEYA “öz kontrol” VEYA
“psikolojik * sermaye” VEYA “temel * benlik * değerlendirmesi” VEYA “kaynak”
VEYA “dayanıklılık” VEYA “koruyucu * faktör” (TÜM ALANLAR)

VE “psikolojik * iyi oluş” VEYA “iyi oluş” VEYA “ödomanik * iyi oluş” VEYA “ödomanik” VEYA “psikolojik * zindelik” VEYA “zindelik” (TÜM ALANLAR)

Proquest doktora ve yüksek lisans tezleri veri tabanı için;

Özet((psikolojik iyi oluş) VEYA (zindelik) VEYA (ödomanik) VE tam
metin((psikolojik iyi oluş ölçekleri)) VE özet((öz saygı) VEYA (öz yeterlik) VEYA
(psikolojik dayanıklılık) VEYA (umut) VEYA (iyimserlik) VEYA (kontrol) VEYA
(kontrol odağı) VEYA (öz kontrol) VEYA (psikolojik sermaye) VEYA (temel benlik
değerlendirmesi) VEYA (kaynak) VEYA (dayanıklılık) VEYA (koruyucu faktör) VE
tam metin((Ryff) VEYA (Ryff ve Keyes)

Yök tez tarama motoru için

“psikolojik iyi oluş”, “zindelik” anahtar kelimeleri içeren tün tezler incelenmiştir.

Araştırmanın kıstaslarını karşılamayan çalışmaların elenmesinden sonra 170
çalışma meta-analize dahil edilmiştir. Bu 170 çalışmadan 251 etki büyüklüğü elde
edilmiştir.

2.6. Kodlama Süreci

Çalışmaların kodlaması, çalışmanın yılı, bağımlı değişkenin türü (ör. iyimserlik, öz
saygı, öz yeterlik vb.), çalışmanın türü (ör. tez, makale), çalışmanın örneklem sayısı,
bağımsız değişken ve psikolojik iyi oluş arasındaki korelasyon katsayısı değeri,
çalışmanın katılımcılarının ülkesi veya ülkeleri, veri toplama tarihi, katılımcıların yaş
ortalamları ve/veya yaş aralıkları, cinsiyet dağılımları ve son olarak bağımlı değişkeni
ölçmede kullanılan ölçme aracı kategorilerini kapsamaktadır.

2.7. Veri Analizi

Çalışmanın verileri R ve CMA (Comprehensive Meta-Analysis) programları
kullanılarak, meta-analiz yöntemi ile analiz edilmiştir. Etki büyüklüklerinin
hesaplanmasında rastgele etkiler modeli baz alınmıştır. Etki büyüklüklerinin
heterojenliği ve yayım yanlılığı Q değeri ve I² katsayısı ile ölçülmüş,
değerlendirilmesinde ise Cohen’in (1988) kıstasları baz alınmıştır (.10 küçük etki, .30
orta düzeyde etki, .50 büyük düzeyde etki).

2.8. Araştırmanın Sınırlılıkları

Öncelikle, araştırma ile bire bir uyumlu olmasına rağmen 48 çalışma, temel bireysel psikolojik kaynak(lar) ile psikolojik iyi oluş arasındaki ilişki(ler)in korelasyon katsayıları yazarlar tarafından raporlanmadığı için, araştırmaya dahil edilememiştir. Ayrıca, 62 çalışma toplam puanlar yerine alt ölçekler bazında korelasyon katsayılarına yer verdiği için elenmiştir. Toplamda 110 çalışmanın bu sebeplerle meta-analize dahil edilememiş olması önemli bir sınırlılıktır.

Bir diğer önemli sınırlılık ise, çalışmada sadece tam metni Türkçe ve/veya İngilizce olan makale ve tezler yer verilmiş olmasıdır. Dolayısıyla, başka bir dilde yayımlanan çalışmalara, araştırmacının dil bariyerinden dolayı yer verilememiştir.

3. BULGULAR

Araştırmanın birinci sorusu olan temel bireysel psikolojik kaynaklar ile psikolojik iyi oluş arasındaki ilişkinin ortalama etki büyüklüğü 0.589 olarak hesaplanmıştır. Cohen'in (1988) kıstaslarına göre hesaplanan etki büyüklüğü oldukça büyük düzeydedir. Toplam 251 etki büyüklüğünün dahil edildiği analizde heterojenlik açısından herhangi bir ihlal olmamasına karşın, yayım yanlılığı bakımından sonuçlar tartışmaya açık ve objektif değildir. Herhangi bir meta-analizin yayım yanlılığından tamamen bağımsız olması söz konusu olamaz. 1a araştırma sorusuna istinaden yayım yanlılığın araştırılmasında kullanılan pek çok yöntem ve testin sonuçlarına bakıldığında, çalışmaların meta-analizi geçerli ve güvenilir kılacak düzeyde bir yayım yanlılığına sahip olduğu söylenebilir.

Araştırmanın 1b, 1c, 1d, 1e, 1f ve 1g soruları sırasıyla psikolojik sağlamlık, umut, iyimserlik, öz saygı, öz yeterlik, öz kontrol ve bütünlük duygusunun psikolojik iyi oluş ile olan ilişkisine ayrı ayrı yanıt aramayı amaçlamıştır. Söz konusu temel bireysel psikolojik kaynakların psikolojik iyi oluş ile ilişkisinin etki büyüklükleri sırasıyla .587, .559, .530, .643, .540, .431 ve .676'dır. Cohen'in (1988) kıstaslarına göre hesaplanan etki büyüklüklerinden altısı oldukça büyük düzeydedir. Bütünlük duygusu ve psikolojik iyi oluş arasındaki ilişkinin etki büyüklüğü ise, büyük düzeye oldukça yakın sayılabilir.

Araştırmanın 2. ana sorusu, temel bireysel psikolojik kaynakların tümü ve her birinin psikolojik iyi oluş ile ilişkisindeki olası düzenleyici değişkenleri araştırmak için yapılan düzenleyici değişken analizlerini içermektedir. Analizlerin sonuçlarına bakıldığında 2a, 2b, 2e ve 2f sorularına ilişkin herhangi anlamlı bir düzenleyici

değişken gözlenmemiştir. 2c sorusunun değişkenleri olan umut ve psikolojik iyi oluş arasındaki ilişkiyi Hofstede'nin "hoşgörü" kültürel değeri olumsuz yönde düzenlemiştir. Şöyle ki, hoşgörü değeri ile daha çok özdeşleşmiş ülkelerden gelen katılımcıların yer aldığı çalışmalarda, daha az özdeşleşmiş ülkelerden gelen katılımcıların yer aldığı çalışmalara göre umut ve psikolojik iyi oluş arasındaki ilişkinin etki büyüklüğü daha düşük çıkmıştır. 2d sorusunun sonuçları, iyimserlik ve psikolojik iyi oluş arasındaki ilişkinin, Hofstede'nin "bireysellik" kültürel değerini daha çok benimseyen katılımcıların yer aldığı çalışmalarda daha yüksek olduğunu göstermiştir. Aksine, 2g sorusunun sonuçları ise, öz kontrol ile psikolojik iyi oluş arasındaki ilişkinin "bireysellik" kültürel değerini daha çok benimseyen katılımcıların yer aldığı çalışmalarda daha düşük olduğunu göstermiştir.

Araştırmanın 2h sorusuna ilişkin düzenleyici değişkenlerden örneklem büyüklüğü, katılımcıların köken ülkesi, Hofstede'nin bireysellik, uzun vadeli yönelim ve hoşgörü kültürel değerleri, bütünlük duygusu ve psikolojik iyi oluş arasındaki ilişkiyi anlamlı olarak etkilemiştir. Ancak, bütünlük duygusu ile ilgili çalışmaya dahil edilen 13 bireysel çalışmanın pek çok düzenleyici değişken açısından uç değerlere sahip olmasından dolayı bu istatistiksel anlamlılık görünüşte (pseudo) olabilir.

4. TARTIŞMA

4.1. Bulgulara İlişkin Genel Tartışma

Bir meta-analiz çalışmasını geçerli kılan en temel iki şart, ortalama etki büyüklüklerinin varyansının küçük olması ve çalışmalar arasındaki heterojenliğin geniş olmasıdır (Borenstein ve ark., 2009). Bu temel iki koşula bakıldığında, bu araştırmanın ilk sorusunun ortalama etki büyüklüğünün güven aralığı %95 [0.622-0.692] olarak hesaplanmıştır. bu sonuç da etki büyüklükleri arasındaki varyansın oldukça küçük olduğunu göstermektedir. Çalışmalar arasındaki kestirim aralığı ise %95 [0.120-0.831] olarak hesaplanmış olup, bu sonuç meta-analize dahil edilen çalışmaların oldukça heterojen olduğunu kanıtlamaktadır.

Temel bireysel psikolojik kaynaklar bazında yapılan 7 ayrı meta-analizde ortaya çıkan etki büyüklüklerine bakıldığında sırasıyla bütünlük duygusu (.676), öz saygı (.643), psikolojik sağlamlık (.587), umut (.559), öz yeterlik (.540) ve öz kontrol

(.431) ile psikolojik iyi oluş arasında büyük ve büyüğe yakın düzeyde (Cohen, 1988) ilişkiler ortaya çıkmıştır.

Hesaplanan ortalama etki büyüklüklerinin değerlendirilmesinde her ne kadar Cohen'in (1988) kıstasları kullanılmış olsa da bazı büyük projeler, sosyal psikoloji ve kişilik psikolojisi alanında ortalama etki büyüklüklerinin değerlendirilme kıstaslarının yeniden gözden geçirilmesini ve yeni bir ölçüt getirilmesi gerektiğini öne sürmüşlerdir. Örneğin, Gignac ve Szodorai (2016) meta-analiz derlemelerinde 708 korelasyon katsayısını incelemiş ve Cohen'in kıstaslarının psikoloji disiplini için .10 (küçük), .20 (tipik), .30 ve üzeri (görece büyük) şeklinde güncellenmesi gerektiğini öne sürmüşlerdir. Yazarların bu önerisi dikkate alındığında, bu meta-analiz çalışmasından elde edilen tüm ortalama etki büyüklüklerinin oldukça büyük olduğu söylenebilir.

Temel bireysel psikolojik kaynakların tümü ile psikolojik iyi oluş arasındaki ilişkiyi hiçbir düzenleyici değişkenin etkilememesi, araştırmanın en çarpıcı bulgularından biridir. Bu sonuç, temel bireysel psikolojik kaynakların pek çok faktörden bağımsız olarak psikolojik iyi oluş ile güçlü bir ilişkisinin olabileceğini düşündürmektedir. Belki de söz konusu temel bireysel psikolojik kaynaklar, evrensel düzeyde ihtiyaçlardır. Bu araştırma, bireyin psikolojik sağlamlığı, umudu, iyimserliği, öz saygısı, öz yeterliği, öz kontrolü ve bütünlük duygusunun kültürden bağımsız olarak, onun psikolojik iyi oluşu ile güçlü bir ilişkisi olabileceğini öne sürmüştür.

4.2. Gelecekteki Araştırmalar İçin Öneriler

- 1) Bu meta-analizde yer alan çalışmaların tümü yetişkin örneklemde oluşmaktadır. Çocuk ve ergen örneklemi ile çalışılabilmesi için hem temel bireysel psikolojik kaynaklar hem de psikolojik iyi oluş açısından geçerli ve güvenilir ölçme araçlarına ihtiyaç vardır.
- 2) Meta-analize dahil edilen çalışmaların çoğunun örneklemini üniversite öğrencileri ve beliren yetişkinler oluşturmaktadır. Gelecek çalışmalarda diğer popülasyonlardan örneklemelere de (ör. yaşlılar, orta yaş gurubundakiler vb.) yer verilmelidir.
- 3) Dahil edilen çalışmaların bazıları farklı özellikte ve bağlamda katılımcılara yer vermiş olsa da (ör., ciddi sağlık sorunları olan çocukların anneleri, COVID-19'dan sağ çıkanlar vb.), azınlık gruplarından, özel ihtiyaçları olan bireylerden

ve dezavantajlı popülasyonlardan (ör. düşük sosyoekonomik düzey) seçilen örneklemelere oldukça az yer verilmiştir. Gelecek çalışmalarda bu gruplara da odaklanılmalıdır.

- 4) Cinsiyet dağılımı açısından gelecek araştırmalarda dengeli bir dağılıma özen gösterilmelidir.
- 5) Cinsiyet bilgisinde ikili yaklaşımdan vazgeçilmeli, temsil edilebilirliğin artırılması için diğer cinsiyet kimliklerine sahip olan katılımcılara da yer verilmelidir.
- 6) Katılımcıların ülkelerinin dağılımında da dengeli bir temsil olmadığı gözlenmiştir. Gelecek araştırmalar Afrika, Güney Amerika ve Avustralya kıtaları ülkelerinden katılımcılara daha çok yer vermelidir.
- 7) Araştırmanın odaklandığı temel 7 bireysel psikolojik kaynak dışında diğer kaynaklar (ör. öz şefkat, şükran, dini ve spiritüel inanışlar vb.) ile de meta-analiz çalışmaları yapılmalıdır.

4.3. Uygulamaya Yönelik Çıkarımlar

- 1) İnsanın güçlü yanlarına odaklanan bir yaklaşımı benimseyen bu meta-analiz çalışmasından elde edilen sonuçlar kişilerin temel bireysel psikolojik kaynaklarını desteklemeye yönelik önleyici ve müdahale edici çalışmaları teşvik edebilir.
- 2) Okullardaki ve üniversitelerdeki psikolojik danışma merkezlerinde öğrencilerin ve çalışanların psikolojik iyi oluşlarını arttırmayı hedefleyen çalışmalarda güçlü yanlara odaklanan bir yaklaşım benimsenebilir.
- 3) Çalışmanın bulguları, daha iyi bir iş ortamı ve performansı yaratmaktan sorumlu yöneticilerin çalışanlarının temel bireysel psikolojik kaynaklarını arttırmaya odaklanan bir yaklaşım benimsemesini teşvik edebilir.
- 4) Ruh sağlığı uzmanları psikolojik danışmanlık ve psikoterapi uygulamalarında danışanların psikolojik iyi oluşlarını desteklerken, onların temel bireysel psikolojik kaynaklarını araştırmasına ve vurgu yapmasına vesile olabilir.

I.THESIS PERMISSION FORM / TEZ İZİN FORMU

(Please fill out this form on computer. Double click on the boxes to fill them)

ENSTİTÜ / INSTITUTE

- Fen Bilimleri Enstitüsü / Graduate School of Natural and Applied Sciences** ☐
- Sosyal Bilimler Enstitüsü / Graduate School of Social Sciences** ☒
- Uygulamalı Matematik Enstitüsü / Graduate School of Applied Mathematics** ☐
- Enformatik Enstitüsü / Graduate School of Informatics** ☐
- Deniz Bilimleri Enstitüsü / Graduate School of Marine Sciences** ☐

YAZARIN / AUTHOR

Soyadı / Surname : Aracı-İyiyaydın
Adı / Name : Ayşegül
Bölümü / Department : Eğitim Bilimleri, Rehberlik ve Psikolojik Danışmanlık /
Educational Sciences, Guidance and Psychological Counselling

TEZİN ADI / TITLE OF THE THESIS (İngilizce / English): **THE RELATIONSHIP BETWEEN KEY INDIVIDUAL PSYCHOLOGICAL RESOURCES AND PSYCHOLOGICAL WELL-BEING: A META-ANALYSIS STUDY**

TEZİN TÜRÜ / DEGREE: **Yüksek Lisans / Master** ☐ **Doktora / PhD** ☒

1. **Tezin tamamı dünya çapında erişime açılacaktır. / Release the entire work immediately for access worldwide.** ☒
2. **Tez iki yıl süreyle erişime kapalı olacaktır. / Secure the entire work for patent and/or proprietary purposes for a period of two years. *** ☐
3. **Tez altı ay süreyle erişime kapalı olacaktır. / Secure the entire work for period of six months. *** ☐

** Enstitü Yönetim Kurulu kararının basılı kopyası tezle birlikte kütüphaneye teslim edilecektir. / A copy of the decision of the Institute Administrative Committee will be delivered to the library together with the printed thesis.*

Yazarın imzası / Signature

Tarih / Date

(Kütüphaneye teslim ettiğiniz tarih. Elle doldurulacaktır.)
(Library submission date. Please fill out by hand.)

Tezin son sayfasıdır. / This is the last page of the thesis/dissertation.