

Multidimensional Analysis of Psychological Well-Being and Its Impact on Academic Achievement in Adolescents: A Cross-Cultural Study

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Abstract:

This research examines the relationship between psychological well-being and academic performance in adolescents, focusing on the dimensions of self-acceptance, autonomy, and personal growth. An adapted version of Ryff's (1989) questionnaire was administered to a sample of 300 secondary school students from Madrid (Spain) and Portugal, employing a quasi-experimental design. The instrument, comprising 39 items evaluated on a 6-point Likert scale, revealed significant differences across all dimensions of psychological well-being between genders and countries. Portuguese adolescents demonstrated higher levels of positive relationships, autonomy, purpose in life, and self-acceptance, while Spanish adolescents excelled in personal growth. These findings underscore the importance of interpersonal relationships and cultural differences in adolescent psychological well-being. The results suggest the need to implement specific interventions that foster positive development in these areas during adolescence, considering gender and cultural context particularities. This study contributes to the understanding of how psychological well-being may influence academic performance and holistic development in adolescents, providing foundations for future research and intervention programs in educational settings.

Keywords: Adolescent Psychological Well-Being, Academic Performance, Cross-Cultural Differences, Positive Youth Development.

1. Introduction

The concept of psychological well-being has its roots in ancient philosophy, particularly in the works of Aristotle, who posited that the pursuit of happiness is a fundamental human objective. Aristotle's theory, which dates back to the 4th century BCE, emphasized the importance of virtuous behavior and the development of one's innate capacities to achieve excellence (Aristotle, 2014). This foundational idea has since evolved into our contemporary understanding of psychological well-being, encompassing a complex interplay of cognitive development, balanced behavior, and personal fulfillment. Over time, various schools of thought have contributed to the refinement of this concept. The hedonistic approach, for instance, highlights the significance of an individual's ability to interact effectively with their environment and attain satisfactory life conditions. However, defining and measuring this state

of satisfaction has proven to be a challenging endeavor, leading to diverse methodologies ranging from global life assessments to detailed analyses of positive and negative aspects (Cabañero et al., 2004; Argyle, 1992). In the current psychological landscape, well-being is conceptualized as the development of individual capacities that foster personal growth and life satisfaction (Díaz et al., 2006). This perspective emphasizes the importance of mastering the ability to navigate environmental challenges and address everyday obstacles that shape an individual's life experiences (Molina & Meléndez, 2006). Such a holistic approach recognizes the multifaceted nature of well-being, acknowledging the interplay between various aspects of an individual's life and their impact on mental and emotional health. One critical element influencing psychological well-being is physical health. While physical limitations, such as illnesses or disabilities, can potentially hinder the full realization of an individual's aspirations, they do not necessarily preclude the possibility of attaining personal satisfaction. The process of adapting to these circumstances and cultivating self-acceptance, including one's physical appearance, emerges as a key component in achieving an optimal state of psychological well-being (Argyle, 1992). Motivation plays a pivotal role in enhancing psychological well-being. The ability to comprehend challenges as they arise and identify solutions through appropriate resources significantly contributes to personal growth and overall well-being (García Álvarez et al., 2019). In this process, self-perception—the internalized view individuals hold about themselves—and feedback received from their environment are key determinants in shaping their psychological state (González et al., 1997). The concept of self, closely tied to an individual's moral and emotional states, encompasses various elements such as one's perception of their abilities, academic development, and relationships with family members (Gutiérrez & Martín, 2021). This multifaceted self-concept plays a crucial role in determining an individual's overall psychological well-being. Carol Ryff's seminal work has been instrumental in shaping our understanding of psychological well-being. Ryff defines it as "the development of capacities and personal growth that produces a greater amount of positive emotions or pleasure and during which the individual shows indications of positive functioning" (Muñoz et al., 2022, p. 156). This definition encapsulates the dynamic and multidimensional nature of psychological well-being, emphasizing its potential for growth and positive change over time. Ryff's conceptualization is grounded in three core principles. First, she asserts that "mental health consists of the continuous pursuit of realizing one's true potential." Second, she emphasizes that "positive health and negative health are independent dimensions," with positive health encompassing both physical and mental components and their interrelations. Finally, Ryff highlights that "positive mental health is a dynamic and multidimensional process that fluctuates according to individuals' evolutionary trajectories" (Muñoz et al., 2022, p. 156). To operationalize this concept, Ryff developed a model comprising six key dimensions: self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989). This multidimensional framework offers a comprehensive understanding of psychological well-being by acknowledging the intricate interplay between various facets of an individual's life. Self-acceptance, defined as the ability to embrace oneself despite limitations, is a cornerstone of psychological well-being (Díaz et al., 2006). Accepting one's imperfections fosters a positive outlook on life and promotes emotional stability. Positive relationships with others involve maintaining trust-based connections with close individuals, which strengthens social bonds and provides essential emotional support (Ryff & Singer, 1998). Autonomy represents another critical dimension, involving the development and maintenance of one's ideas within the broader social context while preserving identity and resilience against external pressures. This aspect contributes significantly to self-efficacy and emotional balance (Ryff & Singer, 2002). Environmental

mastery, the sense of control over one's surroundings, is equally important for psychological well-being. Feeling capable of influencing one's environment enhances security and self-confidence (Ryff, 1989). Purpose in life and personal growth are the final two dimensions in Ryff's model. Setting goals and working toward them are fundamental aspects of psychological well-being; accomplishing personal objectives fosters satisfaction and promotes ongoing personal development (Díaz et al., 2006). To measure these dimensions effectively, Ryff initially proposed a model with 14 items per dimension. This was later refined into shorter scales before establishing a definitive nine-item pattern per dimension in 2002 (Díaz et al., 2006). These tools provide invaluable insights into understanding psychological well-being's complexity and its impact on individuals' lives. The significance of psychological well-being during adolescence cannot be overstated. UNESCO underscores its importance by stating that "an atmosphere of health and well-being in education is as important as a good curriculum," particularly for adolescents who are sensitive to bodily and emotional states (UNESCO, 2022, p. 5). This recognition highlights the critical need to study and promote psychological well-being during this formative stage of life. Adolescence is a period characterized by identity construction, as young individuals reassess childhood values based on new experiences within dynamic social contexts (García et al., 2019). This process can be particularly challenging due to adolescents' vulnerability to external influences. Factors such as academic difficulties or strained social relationships may adversely affect their psychological state while simultaneously impacting educational outcomes. To better understand and address the psychological well-being of adolescents, researchers have proposed several hypotheses, as outlined in Table 1:

Table 1. Hypotheses on Adolescent Psychological Well-Being and Gender Differences

Improvement Hypotheses	Gender Difference Hypotheses
H1.1.1: Young people improve in terms of self-acceptance	H1.2.1: There are gender differences in self-acceptance
H1.1.2: Young people improve autonomy	H1.2.2: There are gender differences in autonomy
H1.1.3: Young people improve in terms of personal mastery	H1.2.3: There are gender differences in personal mastery
H1.1.4: Young people improve in terms of life purpose	H1.2.4: There are gender differences in life purpose
H1.1.5: Young people improve in personal growth	H1.2.5: There are gender differences in personal growth

Note: Own elaboration

These hypotheses reflect the multifaceted nature of psychological well-being and the potential impact of gender on its various dimensions during adolescence. To address these challenges proactively, it is crucial for psychology professionals to provide essential data for intervening in adolescent development before psychological well-being deteriorates. Key constructs such as self-esteem and self-efficacy play pivotal roles in this process. Self-esteem, shaped by the

feelings and experiences encountered during adolescence, significantly influences both mental health outcomes and academic success. Similarly, self-efficacy—the belief in one's ability to achieve goals—serves as a critical determinant for fostering resilience against adversity while promoting overall well-being. Family relationships and broader social dynamics further contribute significantly to adolescent development. Maintaining healthy familial ties instills a sense of security while cultivating confidence—factors positively correlated with academic performance (Díaz & Vega, 2019). Supportive environments characterized by constructive interpersonal dynamics empower adolescents to confront educational challenges with determination and resilience.

2. Methodology

The study population consisted of adolescent students enrolled in a state-run secondary educational institution in Madrid, Spain. Through convenience sampling, a total of 300 participants were recruited, with an equal distribution of 150 students from Spain and 150 from Portugal. The age demographic of the participants ranged from 12 to 14 years, which is representative of the typical secondary school age group. For the assessment of Psychological Well-being, researchers employed an adapted Spanish version of the Ryff (1989) questionnaire, known as the Psychological Well-being Scale (EBP) (Díaz et al., 2006). This evaluation tool comprised 39 items, each rated on a 6-point Likert scale (1 = "Strongly Disagree" to 6 = "Strongly Agree"). The questionnaire explored several dimensions of psychological well-being, with items distributed as follows:

- Positive relationships: Items 2, 8, 14, 20, 26, 32
- Autonomy: Items 3, 4, 9, 10, 15, 21, 27, 33
- Environmental mastery: Items 5, 11, 16, 22, 28, 39
- Purpose in life: Items 6, 12, 17, 18, 23, 29
- Self-acceptance: Items 1, 7, 19, 25, 31
- Personal growth: Items 11, 12, 13, 18, 24, 30, 34, 35, 36, 37, 38

The research design adopted a quasi-experimental quantitative approach to address the study objectives and test the hypotheses. This design facilitated a comparative analysis between Spain and Portugal. The EBP questionnaire was administered to all participants at two time points: one month before the commencement of the intervention program and one month after its conclusion. The intervention program, designed to enhance various aspects of psychological well-being including autonomy, positive relationships, environmental mastery, and life purpose, was conducted over a three-week period in January. The program was integrated into the participants' regular tutorial sessions. By comparing pre- and post-intervention questionnaire results, researchers aimed to identify potential improvements in participants' overall psychological well-being and its specific dimensions. This methodological approach allowed for a comprehensive evaluation of the intervention's effectiveness across the two countries studied.

Findings

The study's findings reveal significant differences across various dimensions of psychological well-being among adolescents, as measured by the Ryff questionnaire. These differences were observed both between genders and between the two countries studied, Spain and Portugal.

Gender Differences

A t-test for equality of means showed significant differences across all variables examined. Notably:

- Purpose in life: Marked differences were found between males and females.
- Personal growth: Few significant differences were observed between genders.

Table 2 presents the statistical analysis of gender differences:

Table 2. Gender Variable.

Dimension	Mann-Whitney U	Wilcoxon W	Z	Sig. (2-tailed)
Positive Relationships	4302.0	10407.0	-1.348	.178
Autonomy	3835.0	7751.0	-2.513	.012
Life Goals	3313.0	9418.0	-3.831	.000
Self-acceptance	3884.0	9989.0	-2.392	.017
Personal Growth	4045.0	7961.0	-1.987	.047
Environmental Control	4022.0	10127.0	-2.051	.040
Total	4079.0	10184.0	-1.900	.057

Significant differences were also observed between Spanish and Portuguese adolescents:

- **Positive relationships:** Portuguese participants scored significantly higher (216.12) compared to Spanish participants (83.44).
- **Autonomy:** Spanish adolescents exhibited higher scores (225.00) than their Portuguese counterparts (75.50).
- **Purpose in life:** Portuguese participants scored higher (223.50) than Spanish participants (76.01).
- **Self-acceptance:** Portuguese adolescents showed higher scores (224.33) compared to Spanish adolescents (76.01).
- **Personal growth:** Spanish participants outperformed Portuguese participants (225.00 vs. 75.50).

Table 3 presents the statistical analysis of country differences:

Table 3. Nationality Grouping Variable.

Dimension	Mann-Whitney U	Wilcoxon W	Z	Sig. (2-tailed)
Positive Relationships	1257.0	12432.0	-13.293	.000
Autonomy	.000	11325.0	-14.974	.000

Life Goals	150.5	11325.5	-14.782	.000
Self-acceptance	26.0	11201.0	-14.932	.000
Personal Growth	.000	11325.0	-14.968	.000
Environmental Control	.000	11175.0	-14.971	.000
Total	1815.5	12990.5	-12.525	.000

Note: Compiled using SPSS 17.0

These results indicate significant differences in all dimensions of the Ryff questionnaire between Spanish and Portuguese adolescents, with Spanish participants generally scoring higher across most dimensions.

3. Results, Conclusions and Recommendations

This study provides significant insights into the intricate relationship between psychological well-being and various factors in adolescence, emphasizing the crucial role of interpersonal relationships and individual development during this critical life stage. The comparative analysis of high school adolescents from Madrid, Spain, and Portugal offers a valuable perspective on the differences and similarities between these distinct cultural contexts. The centrality of interpersonal relationships in adolescent psychological well-being aligns with existing literature, underscoring the necessity of fostering healthy and supportive social environments during adolescence. The study highlights the importance of promoting positive relationships within both family and school settings. Ryff's model (1989) provided a robust framework for understanding the complexities of psychological well-being in adolescence. Self-acceptance, autonomy, and personal growth emerged as critical factors influencing adolescent psychological well-being, corroborating previous research. Noteworthy disparities were found between genders and countries in certain dimensions of psychological well-being. These findings emphasize the need to consider cultural and social influences in shaping adolescent psychological well-being and to address the specific needs of different demographic groups. Self-acceptance, involving feeling proud of oneself and one's lifestyle, along with autonomy, encompassing the ability to express one's own opinions and value oneself based on personal beliefs, are essential for the development of psychological well-being. Personal growth, involving the active pursuit of projects and the construction of one's own lifestyle, is revealed as a fundamental component for promoting psychological well-being in this population. While this study provides valuable insights, there are limitations to consider. The quasi-experimental design and convenience sampling may have introduced biases into the results. Additionally, data collection focused on two specific countries, limiting the generalizability of the findings to other populations. Future research should delve deeper into cultural and social influences on adolescent psychological well-being, as well as the effectiveness of specific interventions to enhance overall well-being in adolescents. In conclusion, this study contributes significantly to the understanding of psychological well-being in adolescence by identifying key influencing factors and providing relevant information for designing targeted interventions. The results emphasize the need to create environments that foster positive relationships and strengthen aspects such as self-acceptance, autonomy, and

personal growth in young adolescents. By focusing on these areas, we can work towards improving their psychological well-being and overall quality of life.

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