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What Youth Really is About: IDEA-R Confirmatory Factor Analysis

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ABSTRACT

This study examines the psychometric validity of the IDEA-R scale through exploratory (EFA) and confirmatory factor analyses (CFA), evaluating the essential traits of emerging adulthood (18–25 years). IDEA-R was administered to a sample of 243 participants ($M = 21.6$, $SD = 2.23$), 77% of whom were women. The objectives included identifying the latent structure of the instrument and confirming it using advanced statistical methods. EFA revealed four main factors: identity exploration, practical autonomy, independence, and transition to maturity. CFA confirmed a moderate model fit ($CFI = .812$, $RMSEA = .0926$), suggesting the need for theoretical refinements. IDEA-R demonstrated high internal consistency (Cronbach's Alpha = .869), indicating adequate reliability for assessing the psychosocial characteristics specific to this developmental stage. The results highlight the complexity of identity and transitional processes during emerging adulthood, providing a foundation for tailored interventions.

Keywords: emerging adulthood, IDEA-R, factor analysis, identity, autonomy, psychometric validity

1. INTRODUCTION

The Psychosocial Model of Human Development

Human development is a complex and dynamic process, influenced by biological, psychological, social, and cultural factors. Young people explore independence and shape their identity, adults balance career and family life, while older

individuals focus on meaningful relationships and introspection. Psychological development varies significantly across life stages, affecting how individuals form relationships and regulate their emotions.

The Emerging Adulthood Model was proposed by Arnett (2000) in the work "Emerging Adulthood: A Theory of Development from the Late Teens Through the Twenties". This model describes a distinct stage of development, situated between adolescence and early adulthood, covering the approximate period of 18-25 years. Main characteristics of the Emerging Adulthood Model: Identity Exploration: young people explore their identity in areas such as career, relationships, and personal values; Instability: this period is marked by frequent changes in residence, relationships, and professional direction; Self-Focus: young adults concentrate on personal development and independence, making decisions based on their own needs and desires; Feeling In-Between: emerging adults do not perceive themselves as fully adolescent, but neither as fully mature; Endless Opportunities: the perception that the future offers numerous possibilities related to career, relationships, and personal life.

However, the theory has also faced criticism. Some have argued that the period of emerging adulthood might be more of a "luxury" experienced by the white middle class rather than a universal phenomenon (Syed, 2017). Although multiple empirical studies exist, comparative studies between theoretical models that support the distinction of this stage from adolescence or adulthood are lacking. Research takes into consideration the diversity of experiences during emerging adulthood and suggests moving beyond a normative interpretative trajectory toward a more nuanced understanding of the "forms of emerging adulthood", taking into account factors such as socioeconomic status, cultural context, and individual differences (Bowen et al., 2021).

It is precisely these inconsistencies in the literature that necessitate a detailed analysis of the instrument measuring the psychosocial characteristics relevant to the period of youth.

Relevant Psychosocial Characteristics in the Period of Youth

For young people (18-25 years old), a period of major transformations arises, which can favor the onset of depression. This stage often involves intense academic pressures, financial instability, and the negative influence of social media. Constant comparison with others, amplified by digital platforms, can intensify feelings of inadequacy and emotional isolation (Smith et al., 2021).

Young people go through a dynamic stage of identity formation and socio-emotional exploration. Adolescence is characterized by heightened emotional intensity, driven by ongoing neurological development, especially in areas responsible for emotion regulation and decision-making. Peer group influence predominates during this stage, shaping the self-concept and relational patterns (van Hoorn et al., 2020).

Additionally, instability in personal relationships may contribute to a higher risk of depression. According to a meta-analysis by Kreski et al. (2022), the prevalence of major depression among young people reached 28% during this period, with individuals reporting symptoms such as changes in eating habits, a reduced interest in activities they once enjoyed, feelings of sadness, hopelessness, negative self-perception, fatigue, and sleep problems.

Regarding specific manifestations, high-risk behaviors include an increase in suicide attempts, alcohol, nicotine, and substance use, as well as engagement in risky sexual behaviors. In terms of physical health, this condition is associated with a higher risk of cardiovascular diseases and obesity (Thapar et al., 2022).

Research shows that young people with a high level of autonomy and family support develop a more robust psychological well-being, being better able to navigate the challenges of the transition to adulthood (Melendro et al., 2020). From a relational perspective, romantic relationships can be unstable due to a lack of experience in managing conflicts. Young people are more susceptible to anxiety and depression, but also to idealizing intimate relationships, which can lead to frequent relational conflicts. Their ability to manage emotions is still developing, and experiences during this stage contribute to strengthening resilience. According to Klaus Riegel, adult experiences expose individuals to a new level of cognitive challenge, discovering dialectical forces in the surrounding reality. Postformal reasoning also emerges, a level of thinking that comes after Piaget's formal operational stage, which refers to understanding multiple perspectives on a problem, depending on the context. This type of reasoning has been mentioned in several studies and is closely related to the problem-based learning (PBL) approach (Wynn, 2022).

The present study

Objectives

1. Exploration of the latent factor structure within the IDEA-R questionnaire (Lisha et al., 2014) through exploratory factor analysis (EFA).
2. Confirmation of the identified factor structure using confirmatory factor analysis (CFA).
3. Evaluation of the convergent and discriminant validity of the IDEA-R constructs (Lisha et al., 2014).

Hypotheses

H1: The factor structure of the IDEA-R will highlight several distinct dimensions corresponding to the theoretical concepts being evaluated.

H2: CFA will confirm the latent model identified through EFA, showing acceptable fit indices (CFI > .90, RMSEA < .08).

2. METHOD

Participants and procedure

The sample consisted of 243 participants ($M = 21.6$, $SD = 2.23$), of whom 77% were women ($N = 187$) and 23% were men ($N = 56$). In terms of education level, 19.3% of participants had primary or middle school education, while 80.7% had high school or higher education. Regarding marital status, 66.3% of participants were unmarried, while the remaining 33.7% were in a relationship or married. The professional status of participants indicated that 18.3% were employed, and 81.7% were students or unemployed. The majority of participants came from urban areas (79.4%), while 20.6% came from rural areas.

We use exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), aiming to identify alternative relevant characteristics and constructs for the age group of young people (18-25 years) that are not included in Erik Erikson's psychosocial development model. The study focuses on applying the IDEA-R scale (Lisha et al., 2014) ($N = 244$) to analyze dimensions such as exploration versus symbiosis, thereby conceptually adjusting the existing framework.

Instruments

IDEA-R (Lisha et al., 2014) is a self-assessment tool that measures the essential traits of emerging adulthood, including

identity exploration, experimentation or possibilities, negativity or instability, self-focus, and the feeling of being "in-between." Studies have generally shown that the IDEA-R has good psychometric properties. A 4-point Likert scale is used, with higher scores indicating stronger endorsement of the respective dimension.

The IDEA-R scale has demonstrated high internal consistency, with a Cronbach's Alpha coefficient of .869 for both the standardized items and the original items. This value indicates a very good level of internal reliability, suggesting that the items included in the IDEA-R scale consistently measure the proposed construct.

The obtained value exceeds the minimum accepted threshold of .70 for psychometric instruments (Nunnally & Bernstein, 1994), confirming its reliability for use in research aimed at analyzing personal identity and associated psychosocial dimensions. With a total of 21 items, the IDEA-R can be considered a robust tool for evaluating constructs related to identity development, making it suitable for both exploratory and confirmatory studies.

This validation also suggests the possibility of using the instrument in various cultural and socio-demographic contexts, with potential for broad applicability in investigating psychosocial processes associated with mental health.

3. RESULTS

Exploratory Factor Analysis (EFA) is used to identify the dominant components of the IDEA-R scale. This stage helps to explore the latent structure of the scale and determine relevant constructs for the age group of young people, such as exploration versus symbiosis. The table presents the results of a factor analysis using the "minimum residual" extraction method and an oblimin rotation (which allows for factor correlations). Each item in the list is associated with one or more loadings on factors (1, 2, 3, or 4). High loadings ($> .3$) indicate that an item strongly correlates with a specific factor. The uniqueness values reflect the proportion of variation for each item that is not explained by the extracted factors (Table 1).

We observe four relevant factors in the young adulthood period of emerging adulthood, according to Jeffrey Arnett's

model. Factor 1: Dominated by items that suggest exploration, identity definition, and planning for the future – reflects identity development and the sense of purpose in life. It includes: item 10, item 12, item 14, item 15, item 16, item 17, item 18, item 21. Factor 2: Items associated with optimism, independence, and trying new things – indicates the exploration of autonomy and opportunities. It includes: item 1, item 2, item 3, item 4, item 5. Factor 3: It contains items related to personal freedom and identity discovery – reflecting practical and personal autonomy. These include: item 6, item 7, item 8, item 9, item 11. Factor 4: It includes items related to the gradual transition to maturity and the ambiguity of roles – describing the transition to adulthood. These include: item 4 (R), item 19, item 20 (Table 3).

Table 1
Factor loadings for IDEA-R

	Factor				Uniqueness
	1	2	3	4	
i1		.620			.583
i2		.687			.486
i3		.658			.536
i4		.383		-.420	.523
i5		.414			.608
i6			.447		.547
i7	.345		.362		.677
i8			.458		.624
i9			.733		.507
i10	.463		.316		.591
i11			.615		.659
i12	.408				.577
i13					.788
i14	.678				.473
i15	.567				.625
i16	.870				.332
i17	.779				.391
i18	.695				.404
i19				.619	.553
i20	.332			.530	.360
i21	.319				.784

Note. 'Minimum residual' extraction method was used in combination with a 'oblimin' rotation

Table 2
Factor loadings in the scale composition

Factor	SS Loadings	% of Variance	Cumulative %
1	3.87	18.44	18.4
2	2.13	10.15	28.6
3	2.02	9.63	38.2
4	1.35	6.41	44.6

Table 3
The four factor structure of IDEA-R

Identity Development and Sense of Purpose in Life (Factor 1)	Exploration of Autonomy and Opportunities (Factor 2)	Parctical and Personal Autonomy (Factor 3)	Transition to Maturity (Factor 4)
I10. A period of self-sufficiency without the help of others	I1. A period of many possibilities	I6. A period of optimism	I4. A period of personal freedom (R)
I12. A period of self-focus	I2. A period of exploration	I7. A period of discovering one's own identity	I19. A period when you feel lke an adult in some ways, but not in others
I14. A period of defining your own identity	I3. A period of experimentation	I8. A period of independence	I20. A period of gradual becoming an adult
I15. A period of planning for the future	I4. A period of personal liberty	I9. A period of open choices	
I16. A period of searching for a sense of purpose in life	I5. A period of responsibility for yourself	I11. A period of trying new things	
I17. A period of deciding on your own beliefs and values			
I18. A period of learning independent thinking			
I21. A period when you're unsure if you've reached full maturity			

These results suggest that the four factors together explain 44.6% of the total variance in the data. The remaining 55.4% of variance is unexplained, being attributed to other latent factors or measurement errors. The factors with the highest percentage of explained variance (in this case, Factor 1) are the most relevant for understanding the data structure.

Confirmatory factor analysis (CFA) is used to validate the factor structure proposed based on the results of the exploratory factor analysis (EFA). The purpose of this stage is to confirm the adequacy of the identified models and to ensure the robustness of the resulting constructs.

Table 4
Covariance of factors

				95% Confidence Interval		Z	p
		Estimate	SE	Lower	Upper		
Factor 1	Factor 1	.00	a				
	Factor 2	.6231	.0549	.515	.731	11.346	< .001
	Factor 3	.3649	.0741	.220	.510	.923	< .001
	Factor 4	.4455	.0848	.279	.612	.254	< .001
Factor 2	Factor 2	.0000	a				
	Factor 3	.6525	.0652	.525	.780	.006	< .001
	Factor 4	.4222	.0910	.244	.600	.642	< .001
Factor 3	Factor 3	.0000	a				
	Factor 4	.0505	.0915	.129	.230	.552	.581
Factor 4	Factor 4	.0000	a				

Confirmatory factor analysis (CFA) was conducted to identify the explanatory mechanisms relevant for the 18-25 age group, based on the hypothesis that this age group would be

better described by alternative mechanisms rather than intimacy or generativity.

Factor 1 included items such as "a period of defining one's identity" (i14) and "a period of searching for a sense of purpose in life" (i16), with the highest factor loadings (.633 and .640), suggesting that the process of identity definition and existential meaning are central components for young people in this age group.

Factor 2 was dominated by items associated with responsibility and personal freedom, such as "a period of responsibility for yourself" (i5) and "a period of personal freedom" (i4), with significant factor loadings (.439 and .644).

Factor 3 highlighted dimensions such as independence and exploration, represented by items like "a period of independence" (i8) and "a period of trying new things" (i11), with high factor loadings (.697 and .621).

Factor 4 included items related to the transition to adulthood, such as "a period in which you feel like an adult in some respects, but not in others" (i19), with a high factor loading of .667. The presence of this factor indicates that the ambivalent perception of adulthood is another key element in defining this age group.

Table 6
Fit indices

90% CI										
CFI	TLI	SRMR	RMSEA	Lower	Upper	AIC	BIC	χ^2	df	p
.812	.776	.079	.0926	.0829	.103	10688	10915	.444	144	< .001

The results indicate a moderate fit of the model. The CFI (.812) and TLI (.776) values are below the recommended threshold of .90, and the RMSEA (.0926) exceeds the acceptable limit of 0.08, suggesting that the model requires adjustments. However, the SRMR (.0796) is close to the

4. DISCUSSIONS

The factorial structure of the IDEA-R scale confirms four distinct dimensions: identity exploration, practical autonomy, independence, and the transition to maturity. Comparison of CFA results with the developmental stages proposed by Erik Erikson and Jeffrey J. Arnett: The CFA results support the hypothesis that alternative mechanisms, such as exploration, independence, and identity formation, are essential for explaining the characteristics specific to the 18-25 age group. Factor 1 was dominated by dimensions such as "identity formation" and "search for meaning in life," suggesting a strong emphasis on identity development and existential meaning during this period. Factor 2 captured personal responsibility and freedom, including items such as "period of responsibility for oneself" and "period of personal freedom." Factor 3 reflected independence and exploration, emphasizing the need for young people to develop autonomy. Finally, Factor 4 highlighted the transition to maturity and role ambiguity, revealing the complexity of maturity perception during this stage. The results highlight that while intimacy and generativity are important for mental health, young people in this age group face more complex mechanisms, such as autonomy exploration and

acceptable limit, indicating moderate discrepancies between the observed and estimated data.

The exact fit test ($\chi^2 = 444$, $df = 144$, $p < .001$) shows a significant mismatch between the model and the data, but the high sensitivity to the sample size may influence this result. The model may require theoretical improvements or methodological adjustments for a better fit.

identity formation, which are not fully captured by traditional models. Therefore, the analysis suggests that autonomy, identity exploration, and the perception of the transition to maturity are more relevant explanatory mechanisms for this age group. These findings provide a solid foundation for developing personalized interventions that address the specific needs of young people.

Although the confirmatory analysis suggests a moderate fit of the model (CFI = .812, RMSEA = .0926), the results provide a solid foundation for future improvements to the theoretical model.

Practical implications

The IDEA-R scale presents significant applications in psychological and educational counseling, offering a useful framework for developing support programs for young people in transition to adulthood. By identifying key dimensions, such as identity exploration and autonomy, this tool can be used in interventions aimed at improving mental health, promoting stress management, and supporting career decision-making. Additionally, IDEA-R can be integrated into educational policies to create programs tailored to the needs of psychosocial development. Its use may contribute to the prevention of depressive symptomatology through interventions focused on identity exploration and strengthening autonomy.

This study presents a rigorous methodology by combining exploratory and confirmatory factor analysis. The high reliability of the IDEA-R scale, reflected by the Cronbach's Alpha coefficient of 0.869, confirms the solid internal consistency of the instrument. Additionally, the integration of existing theoretical models, such as those proposed by Erikson and Arnett, provides a well-grounded conceptual framework. IDEA-R has wide applicability both in psychological research and in educational and clinical interventions, being adaptable to various cultural and socio-economic contexts.

Limitations and Future Directions

The factor analysis of IDEA-R suggests that the four factors together explain 44.6% of the total variation in the data. The remaining 55.4% of the variation is unexplained, attributed to other latent factors or measurement errors.

Another limiting aspect is the use of a predominantly urban sample with high levels of education, which may restrict the generalizability of the results to more socio-economically and culturally diverse populations. Expanding the sample in future studies could provide a more comprehensive perspective.

The exclusive use of self-reported scales can introduce subjective bias. Longitudinal studies could provide a clearer perspective on the dynamics of generativity and intimacy, and how they influence mental health in the long term. Additionally, the development of a specific instrument for analyzing emerging adulthood, which integrates dimensions such as identity exploration, autonomy, and symbiosis, could significantly

contribute to understanding the psychosocial needs of young people and designing personalized interventions.

For future research, it is recommended to expand the sample to include more culturally and socio-economically diverse groups, facilitating the cross-cultural validation of the scale. Longitudinal studies could investigate the stability of the IDEA-R dimensions and how they evolve throughout the transition to adulthood. Alternative models, including bifactorial or multidimensional analyses, can be explored to capture the complexity of psychosocial processes. Other directions include correlating the IDEA-R dimensions with relevant variables such as mental health, adaptability, and professional success, to extend the predictive validity of the scale. The development of additional items or adjustments to existing ones could improve model fit. Furthermore, testing the scale in other age groups, such as adolescents or older adults, may provide insight into the continuity of identity development and autonomy processes.

Comparative analysis of the IDEA-R results with similar models applied in other cultural contexts may highlight the universality or specificity of the constructs being assessed. Integrating longitudinal analyses could offer a perspective on the stability of the identified dimensions over time, contributing to a deeper understanding of maturation processes. Additionally, linking the IDEA-R dimensions with external variables, such as social support, life satisfaction, or depressive symptoms, could extend the predictive validity of the instrument. These approaches could provide a more comprehensive view of protective and vulnerability factors during emerging adulthood.

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