The Relationship Between Education Level, Age, and Socio-emotional Intelligence in Adults: An Exploratory Analysis

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Abstract:

The modern society has challenged social interaction that has undergone significant changes due to the social and cultural transformations they experience. Consequently, the role of socio-emotional intelligence has become paramount for individual success and the quality of life. In this context, the present study aimed to investigate how age and education level, as independent factors, might influence the development of socio-emotional intelligence skills, which are essential in everyday life. The research sample consisted of 340 participants from the Romanian counties of Dolj, Olt, Mehedinți, Vâlcea, and Gorj. We used the IPIP socio-emotional intelligence scale to measure the level of socio-emotional intelligence, while age was recorded as a quantitative variable and education level as a qualitative variable (categorized as medium and higher education).

The results indicated no significant differences in socio-emotional intelligence levels between individuals with medium and higher education (t=1.21, df=378, p=0.22, as p=0.22, p>0.05). Regarding the age factor, a positive and significant correlation was found between socio-emotional intelligence levels and the age of adults (r=0.56, p=0.02), concluding that as age increases, the level of social and emotional intelligence tends to be higher.

Keywords: social intelligence, emotional intelligence, education differences, age differences.

Introduction

Socio-emotional intelligence (SEI) represents a critical domain of human cognitive and emotional functioning, encompassing the ability to perceive, interpret, and effectively respond to social and emotional cues. In recent years, SEI has gained considerable attention in academic and applied fields due to its implications for personal well-being, professional success, and social adaptability (Goleman, 1995; Mayer et al., 2004), especially in self-regulation which enhances a better's social response in different settings (Kurmanova et al., 2024; Yingqiao et al., 2024; Lee et al., 2024). Jose & Thomas (2023) outline the pivotal role that socio-emotional intelligence has in young adults' success across academic, professional, and personal domains. It enhances decision-making, problem-solving, and the ability to form meaningful interpersonal relationships. While research has extensively documented the role of SEI in various life outcomes, less is known about how individual factors, such as education level and age, influence the development and expression of SEI, particularly in adult populations. Factors like cultural background, gender differences, and socio-economic status impact SEI development but remain underexplored (Jose & Thomas, 2023).

Education, often conceptualized as a mechanism for cognitive and skill development, may serve as a key determinant of socio-emotional intelligence. Formal education exposes individuals to diverse perspectives, critical thinking exercises, and collaborative environments, which can enhance both social and emotional competencies. However, the relationship between education level and SEI remains inconclusive, with some studies suggesting a positive correlation (Turi et al., 2018) and others indicating minimal or inconsistent effects (Tanakinci & Yildirim, 2010; Promsri, 2017). These inconsistencies may arise from varying definitions of education, ranging from years of schooling to intrinsic skills acquisition, and the lack of uniform emphasis on socio-emotional skill development in educational curricula.

Age is another factor that may shape SEI, as emotional regulation and social understanding tend to evolve with maturity. Developmental theories suggest that as individuals grow older, they accumulate life experiences that foster greater self-awareness, empathy, and interpersonal effectiveness (Carstensen & Charles, 2010). Nonetheless, the interaction between age and SEI is complex, with some research indicating a peak in middle adulthood and others pointing to a decline in later years due to cognitive aging (Fernández-Berrocal et al., 2016).

This study aims to explore the relationship between education level, age, and socio-emotional intelligence in adults. By examining these variables in tandem, the research seeks to address gaps in the existing literature and provide insights into the factors that influence socio-emotional competence across diverse adult populations. This exploratory analysis contributes to a deeper understanding of the role that education and age play in fostering socio-emotional intelligence, with potential implications for educational policy, lifelong learning initiatives, and interventions designed to enhance quality of life in adulthood.

1. Literature Review

The term of social and emotional intelligence represents a relatively recent development within the fields of sociology and psychology, first emerging in the early 20th century (Thorndike, 1920, p. 227). Its conceptualization has been the subject of enduring debate, particularly with regard to its semantics. Certain theorists regard it as a dimension intrinsic to personality and interpersonal competencies, one that stands apart from the traditional notion of intelligence, which has long been associated with performance, adaptability, and problem-

solving (Scarr, 1989). In contrast, other scholars frame it as a ground-breaking paradigm in the understanding of performance, adaptation, and problem resolution (Salovey et al., 2002, p. 159). As presented by Desmet (2023) we can define the two types of intelligence: emotional intelligence that refers to the capacity to perceive, understand, and appropriately respond to both one's own emotions and those of others and social intelligence, that on the other hand, focuses on the ability to navigate and adapt to social contexts. It includes skills like interpreting social cues, exercising diplomacy, and fostering harmonious interactions.

An important inquiry underpinning the exploration of social and emotional intelligence pertains to the roles of education and age. Can this competency be shaped by academic attainment and chronological development, or does it constitute an innate, autonomous aptitude, impervious to socio-educational influences and independent of age as both a physiological and sociocultural construct?

1.1. Age Differences

With regard to intelligence and its progressive, evolutionary aspect alongside age, one of the most renowned theories of intellectual development is Jean Piaget's theory, which delineates developmental stages by age. Piaget identifies symbolic thought as characteristic of the 0-4 years age range, followed by preconceptual thinking from 4 to 7 years, which evolves as a continuation of the preceding stage. Subsequently, from the onset of schooling until approximately 11–12 years of age, the author discusses intuitive thinking, characterized by concrete operations grounded in intuition. Finally, during puberty and adolescence, formal operational thinking emerges (Piaget, 1965, pp. 168–169). Piaget (1965, p. 200) also addresses the social dimension in terms of the socialization of individual intelligence, specifically how the child's social environment influences intellectual development and the exchanges the child has with this environment. Thus, the new-born is situated at the center of a variety of relationships that signal the values, norms, and rules of later social life. As language develops during the symbolic and intuitive periods, new social relationships emerge that expand and transform the individual's thinking. His theory highlights the development of general intelligence, cognitive operations, and the stages traversed from birth to adolescence. While his approach is cognitive and has limited resonance with social and emotional intelligence, it represents one of the earliest theories to emphasize the progressive and evolutionary nature of intelligence in general terms, retaining historical significance and practical relevance even today.

Age is also, another demographic characteristic that impacts social and emotional intelligence (Asghar et al., 2019). This phenomenon is explained by the physiological aging of brain cells, a process that affects mental functions, rendering them less agile and flexible, while various aspects of memory deteriorate to varying extents. Understanding others is a crucial aspect of social intelligence and an individual ability that contributes to successful aging. This capacity reflects life satisfaction, wisdom, and reduced loneliness in old age (Happé et al., 1998, p. 360). On the other hand, there are some studies that indicate that there is no significant correlation between age and emotional intelligence, but these were developed within very specific demographic population (Todorova, 2024).

Reiter et al. (2017, p. 1) propose an integrated theory of age-related changes and social functioning. The authors distinguish between the cognitive and affective facets of social information processing and how aging differently impacts these domains. The socio-cognitive trajectory involves mentalizing and metacognition, while the socio-affective trajectory

encompasses empathy - the sharing of others' feelings - and compassion, a sense of care for others. Aging is associated with deficits in metacognitive abilities, particularly for factual reasoning problems, though these deficits do not generalize to social metacognition. Simultaneously, the authors find that empathic responses remain intact, and compassion even increases in older adults, demonstrating preserved or enhanced socio-affective functioning in later life.

Happé, et al. (1998, p. 358) examine the theory of mind in the context of normal aging and conclude that, while performance in practical tasks declines with age, theory of mind - the ability to attribute mental states to others and understand them - remains stable or even shows superior results. Age-related differences in social intelligence have also been identified by Ali, Ahmad, and Khan (2019, p. 148), who report that social intelligence levels increase with age. This may be attributed to the accumulation of experiences in communication, behaviour, and social respect as individuals grow older.

Moreover, Grainger et al. (2023) developed a study investigating the social intelligence dimension on a very large range of time, in a group of subjects aged between 18 and 101. The authors outlined a negative association of aging with the Theory of Mind and social perception, but a positive one with affective empathy and social behaviour, concluding that these abilities continue to develop during our life-span.

Benwik (2016, p. 1) discusses research conducted by Hartshorne & Germine at Harvard University on a sample of 12,000 subjects. This research evaluated the peak of cognitive functioning as well as social and emotional abilities. While cognitive abilities such as processing new information peak at age 18 and memory reaches its zenith at age 20, social intelligence improves between the ages of 20 and 30, peaking around 40. The tests administered included evaluating images of human expressions to identify the emotions being communicated. A decline in performance on these tasks was observed after the age of 60. Based on these findings, Benwik (2016, p. 2) outlines implications for business and management, suggesting the allocation of tasks based on age. For example, older individuals are better suited for conflict resolution and negotiation tasks due to their higher levels of social and emotional intelligence, whereas younger individuals may be more appropriate for tasks requiring extensive memory retention.

Further evidence of the relationship between age and emotional intelligence is provided by Cabello et al. (2016, p. 1490), who compared this ability across subjects aged 17 to 76. Young adults and older adults scored lower than middle-aged adults in overall emotional intelligence as well as in each of its four specific branches, resulting in an inverted U-shaped model over the adult lifespan. An exception to this trend was the ability to understand emotions, which decreases with age. This study concludes that the increase in cognitive capacity and life experience facilitates emotional functioning during early adulthood, culminating in middle age.

Lau (2016, p. 3) assessed social intelligence among adolescents, aiming to identify specific characteristics of this age group and potential differences based on gender or other factors. The findings suggest that social understanding continues to develop and consolidate throughout adolescence. While adolescents value independence, they also form strong group identities to which they remain loyal. A potential negative consequence is their struggle to diversify social circles. As society grows more diverse and the economy increasingly globalized, it is crucial for adolescents to acquire social skills to navigate and adapt to these changing contexts.

Adolescence remains a pivotal stage for emotional intelligence due to the biological, social, and cultural changes it entails, with relationships playing a central role. Many skills are honed through interactions with peers, friends, or participation in extracurricular activities, leaving a significant impact on adulthood.

These insights into age-related differences in social and emotional intelligence align with the socio-emotional selectivity theory proposed by Carstensen et al. (1999, pp. 165–181). This theory posits that older adults become increasingly selective, focusing their resources on the socio-emotional content of life rather than self-oriented, future-focused goals. The underlying explanation is tied to the perception of time, which fundamentally shapes the selection and pursuit of goals. When time is perceived as open-ended, knowledge-oriented objectives are prioritized. In contrast, when time is perceived as limited, particularly in later life, emotional goals take precedence. The intricate relationship between perceived time remaining and chronological age underscores age-related differences in social goal-setting and achievement. However, the authors note that time perception is malleable, with social objectives shifting across the 20–83 age range in response to time constraints.

1.2. Level of Education Differences

Social and emotional intelligence, encompassing the ability to navigate interpersonal relationships, regulate emotions, and empathize with others, is increasingly recognized as critical for personal and professional success. While these competencies are often considered inherent, our research investigated if the educational attainment might play a pivotal role in shaping and enhancing these abilities. Education exposes individuals to diverse social contexts, fosters cognitive flexibility, and cultivates critical thinking, all of which are essential for understanding and responding to complex emotional and social cues. Moreover, structured learning environments provide opportunities for collaborative problem-solving, conflict resolution, and emotional regulation, which may directly contribute to the development of social and emotional intelligence. This paper explores the theoretical and empirical links between educational level and these forms of intelligence, aiming to elucidate how academic experiences might influence their progression.

Although there is evidence of associations between social intelligence and school or academic achievement, a limited number of studies indicate a negative correlation, illustrating a weak link between the two variables (Tanakinci & Yildirim, 2010; Sreeja & Nalinilatha, 2017). Consequently, it can be argued that social intelligence, unlike emotional intelligence, has a questionable impact on academic success, necessitating further research as an aspect of students' quality of life. In this regard, Sreeja & Nalinilatha (2017, p. 487) reveal in their correlational study that there is no positive association between social intelligence and academic success. In the schools where the hypothesis was tested, the level of social intelligence was low, while academic success was moderate to high, thus precluding a positive relationship. Moreover, the academic environment is portrayed as one that does not offer opportunities to develop this relationship, nor to foster optimal behaviour or a good social attitude with a specific set of skills aligned with this type of intelligence. As such, the results contradict previous studies but may be limited by the inability of the sampling environment to allow the development of this characteristic and to demonstrate a significant relationship between the two concepts. Similarly, Tanakinci & Yildirim (2010, p. 1127) also investigated the relationship between social intelligence and academic success, obtaining similarly weak and nonsignificant correlations.

Zhang (2022) found no significant association between education level and social intelligence, as measured by the Reading the Mind in the Eyes Test (RMET), concluding that the ability to read emotions may be more innate than learned. Also, Nuradinov et al. (2023) indicates that social intelligence is unrelated to educational performance, which correlates with the level of mental development.

Sparks (2024) outlines the key traits observed in children that correlate with later financial success and highlights the importance of emotional intelligence and interpersonal abilities, suggesting that these traits help individuals navigate challenges and form productive relationships in their personal and professional lives. According to the article, traits such as perseverance, strong social skills, and self-discipline were consistently linked to higher financial success in adulthood. These leads to the question if socio-emotional intelligence is inherited from parents or educated during lifetime?

Turi et al. (2018, pp. 90–92) identified a positive correlation between socio-emotional intelligence, considered as a unified concept, and academic performance across three categories of participants: undergraduate, master's, and doctoral students. They even suggest utilizing these findings to develop practices through which socio-emotional intelligence could be integrated into learning strategies to enhance the likelihood of significant academic outcomes. Therefore, the authors propose the organization of rigorous training workshops and courses on socio-emotional intelligence development, which should be included in curricula and initial training. The researchers argue that educators should be equipped with socio-emotional intelligence skills to facilitate students' academic performance and predict their progress. Furthermore, the authors highlight gender differences. Women are found to be more self-focused, with higher socio-emotional intelligence and better abilities to manage affective states. In contrast, men perform better in stress-management situations and exhibit strong interpersonal skills. Another highlighted conclusion is that as the level of education increases, so does the level of socio-emotional intelligence, indicating a positive relationship between these two concepts.

Rani et al. (2018, p. 3272) examined the relationship between parental education and the level of adolescents' social intelligence. Adolescence is considered a critical transitional stage from childhood to adulthood, from dependence to independence, marked by significant changes. The study revealed major differences in the level of social intelligence correlated with memory capacities. Adolescents from families with parents who have secondary or higher education exhibited better memory compared to those from uneducated families. Additionally, these adolescents demonstrated a higher level of social intelligence correlated with memory and parental education level. The facets of social intelligence investigated included patience, cooperation, trust, sensitivity, recognition of the social environment, tact, humour, and memory. This perspective is supported by Judy and Arthur (as cited in Rani et al., 2018, p. 3271), who note that parents with strong values, integrity, and positive attitudes can instil similar traits such as honesty, discipline, fairness, and integrity in their children. The process of modelling and transmitting these sets of moral traits parallels the formation of social and emotional intelligence skills from parent to child.

2. Research Methodology

Research Objectives

The objective of this study is to investigate how factors such as education level and age can differentially influence social and emotional intelligence levels. Within this framework, the study assessed the intensity of the relationships between the investigated constructs using two control variables: age and education level.

Hypotheses of the Research

The present survey starts from the following research hypotheses:

H1: Higher education levels are positively associated with higher levels of social and emotional intelligence.

H2: As the age of adults increases, their social and emotional intelligence also increases.

Research Variables

This research identifies two independent variables: level of education and age and one dependent variable, the level of soci-emotional intelligence.

In the case of the first research hypothesis the variables are categorized as qualitative (education level, which will be expressed categorically as: secondary education, higher education) and quantitative (social-emotional intelligence level). The independent variable in this case is education level, while the dependent variable is the level of social and emotional intelligence being studied.

In the case of the second research hypothesis the variables are quantitative: age, which is measured by the number of completed years of life, and social-emotional intelligence, which is expressed in numerical scores. In this case, age is the independent variable, while the dependent variable is the level of social and emotional intelligence.

2.1. Research Methods and Tools

The research employed quantitative research methods following the operationalization and the study of the scientific literature, taking into account the field that was studied. The investigation was based on a psychological survey using the questionnaire to assess the level of socio-emotional intelligence.

Social/Emotional/Personal Intelligence Scale

The instrument employed to evaluate socio-emotional intelligence in the adult respondent sample is part of a collection of inventories developed within the IPIP (International Personality Item Pool) project, initiated in the latter half of the 20th century. This project, launched by Goldberg (1999), aimed to facilitate the development and improvement of such scales and questionnaires. The selected tool aligns with our research model as it measures social intelligence through the individual's own reporting of their interactions. Additionally, our decision to use this questionnaire was informed by the work of Rusu et al. (2012), who validated the tool with a group of Romanian students, demonstrating statistically significant results regarding its validity.

More specifically, this scale consists of 10 items and was translated from English to Romanian by Iliescu (2015). It is freely available for research purposes through the website researchcentral.ro (Research Central, 2022), from which it was obtained for this study. The scale is part of a set of 371 personality scales, and it was validated on the Romanian population for practical research and evaluation use (Iliescu, Popa, & Dimache, 2015, p. 83). Each item in the questionnaire represents a statement that respondents are asked to evaluate on a Likert scale from 1 to 5, as follows: 1-Strongly Disagree (if the statement is entirely false or the respondent strongly disagrees); 2-Disagree (if the statement is somewhat false or the respondent disagrees); 3-Neutral (if the statement is equally true and false or the respondent feels neutral about it); 4-Agree (if the statement is somewhat true or the respondent agrees); 5-Strongly Agree (if the statement is clearly true or the respondent strongly agrees).

2.5. Formation and Selection Criteria of the Sample

The present study adopts a selective approach, focusing on the sampling and selection of respondents based on a defined set of criteria to ensure they are representative of the population targeted by the research. In this case, the sampling method employed was non-probabilistic, as the selection of participants followed a preferential, convenience-based procedure, in line with the inclusion and selection criteria (Kazimier, 1967; Mărginean, 2000).

Research Population

The investigated population included 340 adult respondents from the Romania counties of Dolj, Gorj, Mehedinți, Olt, and Vâlcea. The criteria for population selection included general aspects as availability- participants must be willing to participate in the study, demographic criteria-participants must come from the South-West region of Romania, specifically from one of the following counties: Dolj, Gorj, Mehedinți, Olt, or Vâlcea and nonetheless psycho-emotional criteria-participants must be mentally fit, with no psychiatric diagnoses, and must not have experienced any major psycho-emotional traumatic events in the past year, as such events could lead to response bias in the quality-of-life questionnaire.

Methods of Collecting and Processing Data

The participants in this study were verbally informed about the study's objectives, hypotheses, and methodology, after which they provided written informed consent. In the case of minors, consent was obtained from their parents or legal guardians.

Data collection was conducted using standardized pencil-and-paper instruments, administered in a controlled indoor setting to ensure confidentiality and optimal conditions for accurate responses. All assessments were administered by the principal investigator, who is also a licensed clinical psychologist.

Following the data collection, the responses were manually scored according to the established scoring guidelines for each instrument. The data, including participant demographics (age, gender, parental status), were then entered into IBM SPSS Statistics Version 26 for subsequent analysis.

To test the study hypotheses, Pearson's correlation coefficient (r) was employed to evaluate the strength and direction of the relationship between the two quantitative variables. Additionally, confidence intervals were calculated using the online tool provided by Psychometrica.

3. Results

3.1. Descriptive Statistics

In relation to the socio-emotional intelligence levels of adults, the descriptive statistics indicate that there are minor differences based on gender, education level, and family structure as follows: females recorded a higher mean level of socio-emotional intelligence (M=36.97, SD=4.86) compared to males (M=36.79, SD=4.05). Additionally, respondents who are members of a nuclear family currently exhibited a higher average level of socio-emotional intelligence (M=36.69, SD=4.26) compared to those from single-parent families (M=35.67, SD=2.85). Regarding education level, individuals with secondary education showed a slightly higher level of socio-emotional intelligence (M=36.93, SD=4.43) compared to those with higher education (M=36.30, SD=3.84).

Table 1. Descriptive statistics of SEI regarding age, gender and family structure

		Gender		Family structure		Level of education	
		Masc.	Fem.	Nuclear	Single-parent	Mean	Superior
SEQ	mean	36.79	36.97	36.69	35.67	36.93	36.30
	std. deviation	4.050	4.867	4.269	2.857	4.435	3.849

Source: from SPSS v.26 data processing

Based on geographic region, the highest average level of socio-emotional intelligence score was recorded in Dolj County (M=37.19, SD=4.23), while the lowest level was obtained in Olt County (M=33.91, SD=2.56).

Table 2. Descriptive statistics of SEI regarding the county

	County		Statistic	Std. Error
SEQ	Dolj	Mean	37.19	.263
		Std. Deviation	4.231	
	Gorj	Mean	36.67	.477
		Std. Deviation	2.334	
	Mehendinți	Mean	34.80	.457
		Std. Deviation	2.893	
	Olt	Mean	33.91	.387
		Std. Deviation	2.568	
	Vâlcea	Mean	34.00	.000
		Std. Deviation	.000	

Source: from SPSS v.26 data processing

3.2. Testing the First Research Hypothesis

To test our first hypothesis of the study, an independent samples t-test was used to determine if there were significant differences between the group of adults with higher education and the group of adults with secondary education. Initially, the two education categories were numerically redefined: 1 for secondary education and 2 for higher education.

The independent samples t-test was processed using SPSS 26, employing the following procedure: Analyse/Compare Means/Independent Sample T-test. In the main dialog box, the dependent variable SEQ-parent (the score obtained on the socio-emotional intelligence scale by parents) was entered in the Test Variables list, and the independent variable (group) was entered in the Grouping variable area, specifically Education Level. The values defining the two groups, as mentioned earlier, were entered using the Define Groups option: 1 for Secondary Education and 2 for Higher Education.

Tabel. 3. Differences between SEI levels according to educational levels

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
SEQ	Equal variances assumed	2.933	.088	1.217	378	.224	.632	.519	-.389	1.653
	Equal variances not assumed			1.115	97.504	.268	.632	.567	-.493	1.757

Source: from SPSS v.26 data processing

Based on the obtained data, this hypothesis is rejected. According to Popa (2008, p. 296), the first line presents the results of the t-test for the context where the variance of the two groups (secondary education and higher education) is equal, with equality tested using Levene's test. In this case, p=0.08, which is greater than p=0.05, meaning that the equality of variances is accepted, and the result will be read from the first line onwards. Therefore, t=1.21, df=378, p=0.22. Since p=0.22 and p>0.05, the research hypothesis is rejected. In other words, there are no significant differences in the socio-emotional intelligence levels between individuals with higher education and those with secondary education.

3.3. Testing the Second Research Hypothesis

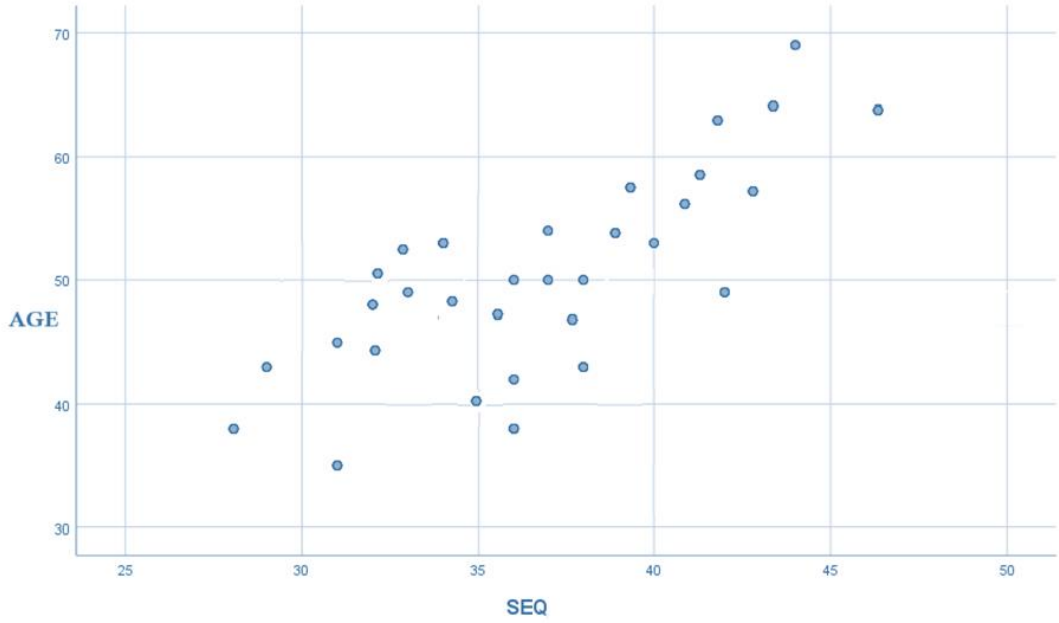
To test the second hypothesis of the research, the Pearson linear correlation coefficient (r) was used to evaluate the association between the two targeted quantitative variables. In this case, the correlation between the score obtained on the IPIP socio-emotional intelligence scale by adults and their age, expressed on a numerical, quantitative scale, was investigated. To test this hypothesis, following the procedure described earlier, the algorithm Analyse/Correlate/Bivariate was selected in the SPSS 26 program.

Table 4. Corelation between the socio-emotional level and age

Correlations		Age	SEQ
Age	Pearson Correlation	1	.560*
	Sig. (2-tailed)		.027
	N	340	340
SEQ	Pearson Correlation	.560*	1
	Sig. (2-tailed)	.027	
	N	340	340

Note: *. Correlation is significant at the 0.05 level (2-tailed).
Source: from SPSS v.26 data processing

Figure 1. Scatterplot graphic for correlation between age and SEI level



Source: from SPSS v.26 data processing

The obtained results confirm the research hypothesis. A significant positive correlation is indicated between socio-emotional intelligence and the age of adults (r=0.56, p=0.02). Since the p-value is lower than the established significance threshold of 0.05, as determined by the program using the Flag Significant Correlations option (p=0.02, p<0.05), this indicates that the association between the two variables is significant. In other words, the older the age, the higher the level of socio-emotional intelligence.

Subsequently, confidence intervals for the tested correlation were calculated to assess the precision of the estimation made for the study sample at the population level, using the online calculation option on the specialized Psychometrica (2022) website. The correlation value (r=0.56) and the number of subjects for this hypothesis (n=380) were entered into the calculation formula, and the confidence coefficient was set at 95%. The automatic calculation formula reveals a confidence interval between 0.49 and 0.62. Since the lower limit exceeds 0, which corresponds to the null hypothesis, the correlation is significant for the population from which the sample was drawn and has a high estimation precision.

Figure 2 Confidence intervals for the correlation between age and SEI

Source: processed online from the website www.psychometrica.de

Regarding the effect size for the correlation coefficient obtained (r = 0.56), according to the description model proposed by Hopkins (as cited in Popa, 2008, p. 163-164), it represents a moderate effect size and indicates a strong level of association between the two variables within the sample.

Conclusions

As shown by the statistical analysis of the data subjected to the present research, the first hypothesis of the research is refuted, so there is no significant association between the level of socio-emotional intelligence and the level of education.

In summary, the findings reveal no statistically significant differences in socio-emotional intelligence between individuals with secondary and higher levels of education. This aligns with prior research, which has similarly demonstrated nonsignificant associations between social intelligence and academic success as a predictor of advanced educational pathways (Sreeja & Nalinilatha, 2017; Tanakinci & Yildirim, 2010). Further corroboration is offered by Promsri (2017), whose investigation into gender, age, and educational differences within corporate environments also failed to identify significant variances in socio-emotional intelligence based on educational attainment.

This observation may be contextualized within the broader distinction between general intelligence (IQ) and socio-emotional intelligence as outlined by Nuradinov et al. (2023). While the former has been robustly linked to higher education levels (Zhang, 2022; Ritchie et al., 2018; Tommasi et al., 2015), the latter appears less contingent on formal academic preparation. The absence of a significant correlation between socio-emotional intelligence and educational attainment in the present cohort of adult respondents may be partially attributable to generational factors. A substantial proportion of participants were born prior to the communist era in Romania, a period characterized by constrained access to higher education due to external determinants, including socioeconomic status and urban residency. In such contexts, even individuals with strong personal abilities faced significant barriers to higher education and related opportunities, largely dictated by environmental limitations.

From a psychosocial perspective, the relationship between socio-emotional intelligence and educational attainment may be further elucidated through an examination of broader educational trends in Romania. As outlined in the theoretical framework, the OECD identifies the proportion of individuals aged 25–64 with higher education as a key indicator of educational quality. While this proportion has shown an upward trend across Europe, Romania reported a

notably low figure of 3.4% in 2017, a statistic closely tied to poverty and material deprivation. Such structural constraints may account for the weak association observed in the present study, suggesting that socio-emotional intelligence is more profoundly influenced by extrinsic factors, such as material conditions, than by formal academic qualifications or the capacity to navigate complex social interactions (Ministry of National Education, 2018).

On the other hand, our second hypothesis is confirmed, as we obtained a significant positive correlation between the socio-intelligence level and the age of the respondents. The conclusion of the present study aligns with the findings of Reiter et al. (2017), who analysed cognitive and socio-affective abilities across the lifespan. While they observed a decline in reasoning and metacognition, empathy, compassion, and other indicators of social and emotional intelligence remained stable or even increased with age. The decline in reasoning abilities is expected, as cognitive responses naturally diminish with cellular aging. However, the sustained or enhanced performance of socio-emotional abilities with age is particularly intriguing.

Similarly, Benwik (2016) highlights a peak in cognitive performance at 18 years of age, whereas social intelligence improves between the ages of 20 and 30, reaching its zenith at 40 before beginning to decline after 60. Based on these observations, Benwik advocates for assigning tasks tailored to employees' peak potentials in specific areas relative to their age. This perspective is supported by a consensus among multiple authors regarding the relationship between age and socio-emotional intelligence (Happé, et al., 1998; Ali, Ahmad, & Khan, 2019; Cabello et al., 2016).

A plausible explanation for this phenomenon lies in the concept of experiential learning. Humans, being self-directed learners, accumulate knowledge through life experiences. Many of these experiences occur during aging, encompassing diverse situations, developmental stages, interactions, and critical circumstances encountered throughout life. Lau (2016) underscores adolescence as a pivotal phase for developing and consolidating socio-emotional intelligence. Meanwhile, Carstensen et al. (1999) propose that older adults tend to prioritize socio-emotional content over self-oriented and future-focused goals. This distinction is rooted in individuals' perception of time, which shifts with age and life stages. When individuals perceive time as expansive during youth, they focus on knowledge acquisition, academic achievement, and professional success. In contrast, when time is perceived as finite in later life, priorities shift towards emotional and relational goals, such as family and social connections. This heightened attention to emotional and social domains may lead to improved functioning in these areas and more effective interactions with others.

Credit Authorship Contribution Statement

Ghiță, R. C. contributed to the conceptualization, methodology, data collecting, formal analysis, investigation, validation, visualization, writing - original draft preparation, and writing - review and editing of the present research study. Sicrea, C. C contributed to the data collecting, investigation, validation and SPSS statistical data processing of the present study. This statement outlines the specific contributions of the authors and the researchers of the present study, ensuring transparency and acknowledgment of her individual role in the research process.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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