



DOI: 10.32604/ijmhp.2024.053599

ARTICLE



Understanding the Link: Emotional Attention in Italian Families and Children's Social Development

Catalda Corvasce¹, Juan Pedro Martínez-Ramón^{2,*}, Francisco Manuel Morales-Rodríguez³, Lidia Pellicer-García⁴, Inmaculada Méndez² and Cecilia Ruiz-Esteban²

Received: 06 May 2024 Accepted: 15 August 2024 Published: 20 September 2024

ABSTRACT

Background: Emotional attention refers to the capacity to recognize and properly respond to one's and others' emotional states. On another note, family is a primary source of socialization that influences the development of various social skills. In another line, adolescence is a complex stage that has been associated with emotional difficulties that could be related to competences such as prosociability and inclusion. It is inferred that through the family context and the attention that is processed, a series of competencies are transmitted to the youngsters, but this relationship is still unclear. For this reason, the study's purpose was to examine the relationship between the emotional attention of mothers and fathers and the social and prosocial competencies of their children. Methods: To accomplish this, a cross-sectional study and ex post facto design were conducted. The Trait-Meta Mood Scale (TMMS-24)-to assess emotional attention-, the Strengths and Difficulties Questionnaire (SDQ)-to determine the prosociality dimension-, and the Test on Passing Developmental Tasks in Adolescence (TCS-A)-to measure social inclusionwere administered. The participants were N = 228 families composed of n = 114 mothers/fathers (67.5% females) and n = 114daughters/sons (38.5% females) selected through non-probabilistic sampling using a convenience sample in the Bari region of Italy. A descriptive and inferential analysis-Student's test and Pearson's correlation-was performed with the statistic package SPSS version 28 (significance level p < 0.05). **Results:** The findings showed that the families possessed an adequate background in emotional attention and that their daughters and sons were also generally well-adjusted in social inclusion and prosociality. It also found certain signs that the prosocial competence of the children could be related to the behavior of their mothers and fathers. Conclusion: In conclusion, social inclusion is related to prosocial behavior, and maybe primarily cultivated within families where parents' emotional self-regulation serves as a model for children although further research is necessary. Comparative studies between different cultures are also proposed.

KEYWORDS

Educational style; coping strategies; stress; social inclusion; emotional attention; prosociality

Introduction

Today's society is beginning to show visible signs of a revolution that marks the transition from a phase in which humankind dominated the machine (digital phase) to a new phase in which the symbiotic coexistence of man and machine marks the advent of the 4th industrial revolution which is characterized by the utilization of artificial intelligence and forms of learning that shift from human to machine, a medium considered faster and more efficient [1].



¹Liceo Statale "Carlo Cafiero", Barletta (BT), 76121, Italy

²Department of Developmental Psychology and Education, University of Murcia, Murcia, 30100, Spain

³Department of Developmental Psychology and Education, University of Granada, Campus of La Cartuja, Granada, CP 18071, Spain

⁴Department of Spanish Language and General Linguistics, University of Murcia, Campus of La Merced, Murcia, CP 30001, Spain

^{*}Corresponding Author: Juan Pedro Martínez-Ramón. Email: juanpedromartinezramon@um.es

It is a revolution that involves the merging of the physical, biological, and digital spheres, affecting all areas of life, systemic: from genetic sequencing becoming nanotechnology, from alternative clean energy to quantum computing [1]. Computers, with their artificial intelligence, will "take over" decisions previously entrusted to humans: they will take off and land airplanes, interpret medical Xrays and electrocardiograms, for example. In summary, technology is poised to surpass biology, positioning humans as secondary actors in this evolution [2]. Confronted with this potentially dystopian scenario, the role of humans becomes critically important [3]. At this pivotal moment, it is imperative to establish ethical and moral boundaries. Without these constraints, society risks devolving into a state of social and economic bipolarity, where a small elite of specialists contrasts starkly with the masses relegated to manual labor. The fourth industrial revolution represents the Rubicon of history: it is up to humanity to decide whether to pursue sustainable systemic humanist models or to venture down the paths of transhumanism at the risk of annulling any ethical, emotional, identity-based, tout court human dimension. Several studies claim, regarding the creation of smart cities as sustainable and efficient places of social coexistence, the need to study what technical limits should be placed on the use of artificial intelligence and machine learning, to safeguard the fairnessrace [4,5]. In this context, it is relevant to refocus the object of study on human factors as essential educational agents, including families and students, who play a crucial role in the development and shaping of various aspects of personality. At the same time, they contribute to the development of communities, social models, and culture itself, transmitting not only values but also respect, empathy, and knowledge.

Today, education is immersed in a rather complex historical climate, in which the world economic crisis and the global health emergency-think of SARS COVID 19-have affected all aspects of life, from the family to society, including the school. In this scenario, developing predictive tools to identify adolescent discomforts, stemming from health control policies, for example, that have isolated and sometimes excluded adolescents from participating in a healthy and regular life, would fall to educational agencies [6]. Scientific tools to intervene and respond to psychological and/or cognitive disorders that may arise in the different areas of relevance are numerous and effective: inventories, questionnaires, interviews, recordings [7]. Such a society must be rebuilt from the ground up and requires people to develop the emotional intelligence and emotional attention that are generally undervalued in the current society [8], which is so focused on mental life. However, the intelligence quotient is a complex factor that must be combined for individual and social well-being with emotional intelligence (self-control, enthusiasm, perseverance, and ability to motivate oneself) [8,9].

Today, education is immersed in a rather complex historical climate, in which the world economic crisis and the global health emergency-think of SARS COVID 19-have affected all aspects of life, from the family to society, including the school. In this scenario, developing predictive tools to identify adolescent discomforts, stemming from

health control policies, for example, that have isolated and sometimes excluded adolescents from participating in a healthy and regular life, would fall to educational agencies [6]. Scientific tools to intervene and respond to psychological and/or cognitive disorders that may arise in the different areas of relevance are numerous and effective: inventories, questionnaires, interviews, recordings [7]. Such a society must be rebuilt from the ground up and requires people to develop the emotional intelligence and emotional attention that are generally undervalued in the current society [8], which is so focused on the mental life. But the intelligence quotient is a complex factor that must be combined for individual and social well-being with emotional intelligence (self-control, enthusiasm, perseverance, ability to motivate oneself) [8,9].

But who is responsible for this educational task? Several studies affirm that the parental role in the cognitive and formative function is the most incisive in the pre-adolescent phase of the individual and that, in this function, the school takes over later, when the adolescent enters a social dimension, freeing him/herself from maternal/paternal "dependence" [10]. Given this scenario, the following question arises: What educational model should the family and the school follow? Education should be understood as a sector responsible for the creation of new well-trained social actors, capable of contributing to society and with a critical sense [11]. An education that sees family and school working in synergy, as a whole and not as mere aggregates without a common thread. Up to now, education has formed subjects that are functional to the economic system, but not to the community system. The educational objective changes the priorities and content of the family and school education system and of mere educational programming. It is necessary to train the individual to be a social actor, and this means emphasizing emotional attention, prosociality, and social inclusion.

Pro-sociality is the attitude towards the other that makes an individual a citizen. To think of oneself as a man means to see oneself as socially embedded in a community where "human quality" is measured in direct proportion to the impact of one's actions on oneself and others. But that is not all. There is also the altruistic component that makes the difference. Acting for the common good is the added value that man acquires in the valuation of an existence conceived in a humanistic key. The more one spends for the community, the more one acts to make a personal social contribution, and the more one increases not only one's psychophysical well-being but also one's self-perception in terms of self-esteem [12,13]. Prosociality and skills related to social integration and inclusion are acquired because of personal and parental emotional attention. Blair's study [14], after analyzing data from a sample of children, found that correlations between parental sensitivity and children's level of friendliness, a latent variable of prosociality, confirmed this importance as early as puberty. The topic of externalizing has been thoroughly investigated in the scientific literature, with a careful focus on family educational style [15] and the child's empathy/sympathy [16].

In this context, the emotional attention provided by the family plays a crucial role in the development of children,

serving as the foundation for their emotional and psychological well-being [17], although the mechanism involved are not completely clear. When families prioritize emotional attention, they might create a nurturing environment where children feel valued, understood, and supported [18]. One of the reasons why it is necessary to study this topic lies in the high prevalence of emotional problems in young people today [19]; knowledge of the relationships between the variables involved and the role of the family could help prevent or mitigate such problems. From the various studies that investigated the types of educational models, and which educational style was most effective, directly and/or indirectly [20-23], it emerged mainly that the authoritative one, characterized by support and appropriate requests, was the most beneficial in the formation of prosocial behavior [24]. Parental support facilitates the development of empathy and prosociality in the child, inhibiting emotional instability and aggressive charge [18], variables often latent in subjects with a negative perception of the parental role. The family's emotional attention favours, for example, the development of the child's ability to interact with the other, learning to make the other's point of view their own and to identify with them, thus facilitating the development of prosocial behaviour [25]. Although one study [26] reported that mothers contribute more strongly than fathers in the socialization pattern of both daughters and sons, another [27] reported, however, that the parental effects of mother and father on children's prosociality were significant (r father = 0.10 and r mother = 0.12) but did not differ significantly. The studies insisted on finding dysfunctional family elements for a correct filial formative process. For example, Hinnant's longitudinal study [28], which assessed through a sample of 242 adolescents the effects between a permissive educational model and the child's externalizing skills, demonstrated the presence of indirect effects of permissive parenting on children's insertion in deviant social/friendship contexts. Other incisive variables were gender and stress levels.

Emotions are at the basis of human action: decisions, ideas, actions of individuals are the result of thoughts that find their genesis in the limbic system, the seat of emotions. Regulating and managing emotions means giving precise direction to our actions and to all the human variables that determine their behavior. If the ability to regulate emotions were not activated in human beings, we would continually see manifestations of poor self-control over our emotional impulses. In fact, numerous scientific studies [29-31] have investigated the issue, pointing out that when there is the ability to control emotions, there is a sense of well-being, whereas when there is emotional dysregulation, i.e., when there is no exercise of self-control, this absence of the ability to block the negative response and activate the positive one leads the individual to perform actions harmful to himself and/or to others. The ability to regulate emotions influences several aspects of the individual's behavior: empathy, morality, prosociality [32,33] and this implies an attentive approach during the training process of the individual, to make a human resource an individual and collective resource. A parent who does not know how to control his

emotions and who does not know how to direct his emotions in the real contexts of active life, who presents victimizing attitudes towards the outside world, who considers himself cruel and evil, will nurture in the child situations of inner conflict between the parental "story" and personal elaborations [34]. Shabbir's study [35] through a quantitative survey showed that the permissive and authoritarian family educational model had a negative correlation with emotional competence and emotional intelligence, budgets of competences related to filial externalization. In contrast, the authoritarian and flexible styles operate. This was also confirmed by the study of García et al. [36] who affirmed through the results of the parental sample of 372 pupils aged 11-15 years that the democratic style achieved higher results in the scores of social competence and self-esteem. Studies converge, therefore, towards an examination of the issue, identifying the family as the primary formative agency that imprints filial interpersonal relational skills and that does so through an educational style that conveys empathy and integrative emotion regulation, decisive variables in the development of healthy prosocial skills [37]. In fact, Hein's study demonstrated, through a sample of 157 children, that the ability to regulate one's own emotions was proportionally related to levels of empathy and prosociality. Another study [38] also demonstrated through data analysis that integrative emotion regulation played an incisive role in promoting prosocial behavior, and in children's psychosocial adaptation in the classroom, facilitating social inclusion.

However, it should be noted that in a complex society such as ours, today we cannot exclude the strong impact of social media among educational agencies. Therefore, we must also consider the psychological conditioning of technology in the educational process of children, developing those emotional competences that, through critical capacity and emotional recognition of the message, do not turn individuals into objects of manipulative conditioning. A study investigating how socializing agents positively influence volunteers' prosocial decisions [15] reported that all four socializing agents (parents, peers, media, and social media) have a positive influence on prosociality, but that only peers influence prosocial attitudes; that women are more prosocial than men; and that peers, media and social media are more influential than men. This very modern phenomenon must be considered and, especially in the adolescent phase, must be monitored by families through careful observation of their children's behavior and virtual choices to transmit the value of empathy and prosociality, but also to know how to manage and regulate their emotions, which have an ethical and moral basis [39,40].

And it is precisely the impact of the family's emotional attention on prosociality and social integration that is the focus of this research. Specifically, the aim of this study was to examine the relationship between the emotional attention of the family and the development of certain competences in adolescent pupils, these being social inclusion and prosociality. The starting hypothesis was that there is a direct and significant relationship between the emotional attention of mothers and fathers and the levels of social

inclusion and prosocial competence in their adolescent children. If the research confirms our hypothesis, in this case, the focus should be on enhancing this competence also at the family level, so that the acquisition of these skills becomes transversal, passing from the family to the children.

Materials and Method

Design and procedure

This was a non-experimental study and quantitative research with an ex post facto design. Data were collected in a scientific institute in the Italian province of Bari with the corresponding pre-emptive consents and ensuring compliance with the ethical principles of the Helsinki protocol and was approved by an Ethics Committee of the University of Murcia, Spain (protocol code 2821/2020). To this end, the study's objective was described and those families and adolescents who gave their consent participated voluntarily, confidentially, and anonymously. At any time, they could withdraw from the investigation without consequences. It was a convenience sample, using the inclusion criteria of families with an adolescent-age son or daughter enrolled in the Italian public school. All cases were excluded if they did not consent, did not understand Italian or did not attend on the day the test was administered. Data collection was completed in 2022.

Regarding the procedure, first, the University contacted the Italian school, explaining the purpose of the procedure to the management team and answering any questions and doubts that might arise. The informative documentation was translated from Spanish to Italian by a native Italian with university studies who was part of the research group through the appropriate procedures. Second, authorization to administer the questionnaires had been obtained from the management team, informed consent was obtained from the families. Although the adolescents were minors and the families had given their consent, they were asked if they wished to participate in the study in order to ensure that it was carried out on a voluntary basis. The questionnaires were administered by disseminating a survey on an online platform aimed at families and adolescents that could be answered using a mobile device or other type of computer with Internet access. The data were compiled in a database for subsequent analysis.

Participants

228 pairs of mothers/fathers and children participated. The parents had relatively heterogeneous characteristics in terms of cultural and economic elements. The students were made up of 45 women (38.5%) and 69 men (59%) between the ages of 15 and 18 (15 years = 3; 16 years = 73; 17 years = 38; 18 years = 1). The family was made up of 114 mothers/ fathers, distributed as follows: 79 mothers (67.5%) and 35 fathers (29.9%), of which 38 (32.5%) were 2nd ESO graduates, 55 (47%) were high school graduates and 21 (17.9%) were university graduates.

Instruments

The following psychometric instruments were administered:

a. Gambini's Test on passing developmental tasks in adolescence (TCS-A) [41]. The Italian original version was

administered [42-46]. It assessed the perceived self-efficacy of 14 to 19-year-old to overcome age-appropriate developmental tasks. This dimension ranges from low social inclusion (30 points) to high social inclusion (70 points) with 50 points in between. The psychometric instrument consisted of 120 items with 5 response options (1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree). The results were converted into scores via conversion tables. The 11 dimensions of the full scale were: (1) body acceptance; (2) relationships with the opposite gender; (3) coping skills; (4) emotional competence; (5) study efficiency; (6) relationships with friends; (7) filial efficiency; (8) social inclusion; (9) identity acquisition; (10) self-knowledge/coherence; and (11) meaning and satisfaction with life. For the present investigation, the social inclusion dimension was selected (example item: "I feel respected by the people in my neighborhood"). The instrument achieved a Cronbach's Alpha value of 0.8.

b. Goodman's Strengths and Difficulties Questionnaire (SDQ) test [47]. It assessed behavior and emotions by administering its Italian version [48]. The SDQ includes 25 closed-ended items, each with three optional answers. It is designed to evaluate behavior and emotions in individuals aged 3 to 17 years. For the present research, the following dimension was chosen-prosociality-using a three-option-scale (0 = Not true; 1 = Somewhat true; 2 = Completely true). Example: "I often offer my help". Prosociality ranged from 0–4 points-abnormal-, to 5 points-borderline case-, and 6–10 points-normal-. Cronbach's Alpha achieved 0.7.

c. The Trait-Meta Mood Scale (TMMS-24) test by Salovey et al. [49] using the Italian version [50], which assessed perceived emotional intelligence through 24 items. The 5-point Likert scale (1 = I totally agree; 2 = I almost)agree; 3 = Neither agree nor disagree; 4 = I disagree, I completely disagree) is composed of three dimensions: Emotional attention ($\alpha = 0.90$), which measures the amount of attention given to one's emotional state (e.g., "I pay a lot of attention to feelings"); Clarity ($\alpha = 0.90$), which assesses the understanding of one's emotional state (e.g., "I am clear about my feelings"); and Emotional Repair ($\alpha = 0.86$), which refers to the ability to regulate one's emotional state (e.g., "Although I sometimes feel sad, I tend to have an optimistic outlook"). The 8 items of the macro dimension emotional attention of the test was selected for the present research. Scores above 36 points for women and 33 for men were in the category of excessive attention, scores between 25 and 35 for women and between 22 and 33 for men were in the range of adequate attention, and finally, scores of less than 24 for women and less than 21 for men implied low emotional attention.

Data analysis

Once the data were obtained, they were entered into a database of the SPSS statistical package (version 28). There were 4% of missing data. Initially, a descriptive analysis was carried out in which frequencies, percentages, means and standard deviations of the main variables were calculated. Secondly, an inferential analysis was carried out in which Student's *t*-test was applied to study the existence of

differences between means when there were two independent groups, as well as Levene's F-test to examine the principle of homogeneity of variance. The significance level was p < 0.05 and the confidence interval for the difference was 95%.

Results

The descriptive analysis of the SDQ and TCS-A item responses according to gender and age of the students is shown in Table 1. The scores indicate normal levels in social inclusion and prosociality; levels, however, increase with increasing age. It turns out that the number of male students was 60, while the number of female students was 45. The student body is between 15-18 years old in the proportion of 15 years = 3; 16 years = 73; 17 years = 37; 18 years = 1. According to the Table 1, the highest means were obtained by the following groups: For social inclusion, the highest mean by age was among 15-year-olds, with a mean of 56.67 (SD = 10.60). By gender, females had a higher mean (52.84, SD = 8.98) compared to males (50.04, SD =8.90). For prosociality, the highest mean by age was among 18-year-olds, with a mean of 10.00. By gender, males had a slightly higher mean (6.28, SD = 2.50) compared to females (6.09, SD = 2.92). In summary, 15-year-olds excelled in social inclusion, while 18-year-olds excelled in prosociality. Females had a higher mean in social inclusion, whereas males had a slightly higher mean in prosociality.

The descriptive analysis of the responses to the TMMS-A on the emotional attention of the family according to gender and family studies indicated levels of adequate emotional attention ($M_{Females} = 26.05$, SD = 7.2; $M_{Males} = 25.11$, SD = 6.55; $M_{Bachelor's\ degree} = 26.34$, SD = 8.25; $M_{Secondary\ school} = 25.35$, SD = 6.40; $M_{Degree} = 25.81$, SD = 6.29). There were 79 mothers and 35 fathers, distributed as follows: 38 with bachelor's degree; 55 with study degree of level belonging to secondary school and 21 with degree.

Statistical analysis of the SDQ and TCS-A item responses are shown in Table 2. For social inclusion, females (n=45) had a mean score of 8.00 (SD=1.81) while males (n=69) had a slightly higher mean of 8.07 (SD=1.52). In terms of prosociality, females scored an average of 52.84 (SD=8.98) compared to males who had a mean score of 50.04 (SD=8.90). Although the mean scores for prosociality were higher for females, and the scores for social inclusion were slightly higher for males, the differences in these means are not statistically significant.

Table 3 shows Family statistics in relation to emotional attention by family's title or level of studies-in the academic field-. While Bachelor's degree holders have the highest mean score for emotional attention, the differences between

TABLE 1

Mean and standard deviation by gender and age among students

| Variables | F | SD | M | SD | 15 years | SD | 16 years | SD | 17 years | SD | 18 years | SD |
|------------------|-------|------|-------|------|----------|-------|----------|------|----------|-------|----------|----|
| Social inclusion | 52.84 | 8.98 | 50.04 | 8.90 | 56.67 | 10.60 | 51.01 | 8.26 | 50.89 | 10.41 | 54.00 | _ |
| Prosociality | 6.09 | 2.92 | 6.28 | 2.50 | 9.33 | 1.16 | 5,.1 | 2.65 | 6.81 | 2.47 | 10.00 | _ |
| Total | 45 | | 69 | | 3 | | 73 | | 37 | | 1 | |

Note: F: Female; M: Male; SD: Standard deviation.

TABLE 2

Comparative analysis of social inclusion and prosociality by gender

| | Gender | n | Mean | SD | Statist. error mean | p |
|------------------|--------|----|-------|------|---------------------|-------|
| Social inclusion | Female | 45 | 8.00 | 1.81 | 0.27 | >0.05 |
| | Male | 69 | 8.07 | 1.52 | 0.18 | |
| Prosociality | Female | 45 | 52.84 | 8.98 | 1.34 | >0.05 |
| | Male | 69 | 50.04 | 8.90 | 1.07 | |

Note: SD: Standard deviation.

TABLE 3 Family statistics about emotional attention by family's title of the level of studies

| | Gender | n | Mean | SD | Statist. error mean |
|---------------------|-------------------|----|-------|------|---------------------|
| Emotional attention | Bachelor's degree | 38 | 26.34 | 8.25 | 1.34 |
| | Secondary | 55 | 25.35 | 6.40 | 0.86 |
| | Degree | 21 | 25.81 | 6.29 | 1.37 |

Note: SD: Standard deviation.

| | | ene's est | Equality of means t-test | | | | | | | |
|----------------------------------|--------|--------------|--------------------------|--------|-------|--------|---|--------|--|--|
| | F Sig. | | t | 3 8 7 | | | Difference Difference between means standard error | | Confidence interval for the 95% difference | |
| | | | | | | | | Lower | Upper | |
| E.A. Bachelor's degree/Secondary | 4.938 | 0.029 | 0.655 | 91 | 0.514 | 0.997 | 1.521 | -2.025 | 4.019 | |
| | | | 0.626 | 66.337 | 0.534 | 0.997 | 1.593 | -2.183 | 4.176 | |
| E.A. Secondary/Degree | 0.072 | 0.790 | -0.284 | 74 | 0.777 | -0.464 | 1.635 | -3.722 | 2.793 | |
| | | | -0.286 | 36.827 | 0.776 | -0.464 | 1.622 | -3.750 | 2.822 | |

Note: df: degrees of freedom.

TABLE 5
Pearson correlations between the variables of the questionnaire

| | 1 | 2 | 3 |
|---------------------------|--------|--------|---|
| 1. TMMS EA family | 1 | | |
| 2. TCS-A Social inclusion | -0.066 | 1 | |
| | 0.487* | | |
| 3. SDQ Prosociality | 0.101 | 0.217* | 1 |
| | 0.286 | 0.020 | |

Note: EA = emotional attention.

the educational levels are relatively small, indicating that educational attainment may not significantly influence emotional attention scores in this sample.

Table 4 shows the results of Levene's test and *t*-tests for comparing emotional attention (E.A.) across different educational levels. The *t*-tests, which evaluated the differences in mean emotional attention scores between educational levels, showed no significant differences between Bachelor's Degree and Secondary education, as well as between Secondary education and Degree holders. The confidence intervals and *t*-values further supported the conclusion that the observed differences in emotional attention between these educational groups were not statistically significant.

Table 5 shows the correlation coefficients between three variables: TMMS Emotional Attention (EA) within the family, TCS-A Social Inclusion, and SDQ Prosociality. First, the correlation between TMMS EA Family and TCS-A Social Inclusion is -0.066, which is not statistically significant (p =0.487), indicating no meaningful linear relationship between emotional attention within the family and social inclusion. Second, the correlation between TMMS EA Family and SDQ Prosociality is 0.101, also not statistically significant (p = 0.286), suggesting that emotional attention within the family does not significantly relate to prosocial behavior. Third, the correlation between TCS-A Social Inclusion and SDQ Prosociality is 0.217, which is statistically significant (p = 0.020). This positive correlation suggested a moderate relationship between social inclusion and prosociality, implying that higher social inclusion was associated with increased prosocial behavior.

Table 6 summarized the results of a multivariate analysis examining the effects of an intercept and variable V18 on dependent variables, using several statistical tests. The intercept showed highly significant effects across all measures (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Root), indicating a robust influence on the outcome variables with very low *p*-values. In contrast, the variable V18 did not have a significant effect on the dependent variables, as indicated by all measures (Pillai's

TABLE 6

Multivariate analysis of intercept effects on dependent variables

| Effect | | Value | F | Hypothesis df | Degrees of freedom from error | Sig. |
|--------------|--------------------|--------|-----------------------|---------------|-------------------------------|-------|
| Interception | Pillai track | 0.980 | 1783.548 ^b | 3.000 | 110.000 | 0.000 |
| | Lambda of wilks | 0.020 | 1783.548 ^b | 3.000 | 110.000 | 0.000 |
| | Track of hotelling | 48.642 | 1783.548 ^b | 3.000 | 110.000 | 0.000 |
| | Root of roy | 48.642 | 1783.548 ^b | 3.000 | 110.000 | 0.000 |
| V18 | Trace of pillai | 0.064 | 2.496^{b} | 3.000 | 110.000 | 0.064 |
| | Lambda of wilks | 0.936 | 2.496 ^b | 3.000 | 110.000 | 0.064 |
| | Track of hotelling | 0.068 | 2.496^{b} | 3.000 | 110.000 | 0.064 |
| | Root of roy | 0.068 | 2.496 ^b | 3.000 | 110.000 | 0.064 |

Note: a. Drawing: Intercept + V18; b. Statistical accuracy.

TABLE 7

ANOVA results for TMMS-24, social inclusion, and prosociality

| Source | Dependent variable | Sum of Type III quadrats | df | Square stockings | F | Sig. |
|-----------------|--------------------|--------------------------|-----|------------------|----------|-------|
| Correct model | Total TMMS-24 | 213.979a | 1 | 213.979 | 4.494 | 0.036 |
| | Social inclusion | 213.684b | 1 | 213.684 | 2.680 | 0.104 |
| | Total prosociality | 0.947c | 1 | 0.947 | 0.132 | 0.717 |
| Interception | Total TMMS-24 | 70,665.979 | 1 | 70665.979 | 1484.182 | 0.000 |
| | Social inclusion | 288,327.158 | 1 | 288327.158 | 3615.881 | 0.000 |
| | Total prosociality | 4163.824 | 1 | 4163.824 | 581.908 | 0.000 |
| V18 | Total TMMS-24 | 213.979 | 1 | 213.979 | 4.494 | 0.036 |
| | Social inclusion | 213.684 | 1 | 213.684 | 2.680 | 0.104 |
| | Total prosociality | 0.947 | 1 | 0.947 | 0.132 | 0.717 |
| Error | Total TMMS-24 | 5332.626 | 112 | 47.613 | | |
| | Social inclusion | 8930.781 | 112 | 79.739 | | |
| | Total prosociality | 801.413 | 112 | 7.155 | | |
| Total | Total TMMS-24 | 81,213.000 | 114 | | | |
| | Social inclusion | 307,395.000 | 114 | | | |
| | Total prosociality | 5187.000 | 114 | | | |
| Total corrected | Total TMMS-24 | 5546.605 | 113 | | | |
| | Social inclusion | 9144.465 | 113 | | | |
| | Total prosociality | 802.360 | 113 | | | |

Note: a. R-squared = 0.039 (R-squared correct = 0.030); b. R-squared = 0.023 (R-squared correct = 0.015); c. R-squared = 0.001 (R-squared correct = -0.008).

Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Root) with *p*-values above the conventional significance threshold.

Table 7 shows that while the model significantly predicted total TMMS-24 (p=0.036), it did not significantly predict social inclusion or prosociality (p>0.05). The intercepts for all variables were highly significant, suggesting that the overall means were significantly different from zero. However, the R-squared values were low, with only a small proportion of variance explained: 0.039 for Total TMMS-24, 0.023 for Social Inclusion, and 0.001 for Total Prosociality in ANOVA test.

Discussion

The aims of this study were to investigate the impact of parental emotional attention on children's externalizing skills, especially social inclusion and prosociality. Our hypothesis h1 was to confirm the relationship between these variables, while assessing latent variables such as parents' ability to regulate emotions as a neural mirror of their children [51]. To this end, parents were administered the TMMS-24 [48], which assessed the degree of focus given to one's own emotions, and the students were administered the Prosociality item of the SDQ [47] which assesses the strengths and weaknesses, in this case of the students, and the Social Inclusion item of the TCS-A [41] which valorated the level of development, i.e., at what stage the adolescent is in relation to their developmental tasks. Analysis of the data from the statistical surveys and the t student test showed that parents had adequate levels of emotional attention, with

no gender or cultural differences, and students had normal levels of socialization and prosociality, with no gender differences. However, at an older age, 18 years, psychosocial levels were found to have increased, supporting the theory that such skills are enhanced through interaction with peers [15].

Adequate parental emotional attention confirms what the scientific literature affirms, namely that, in light of the existing differences in educational models (democratic, permissive and authoritative) [21,52] the most beneficial in terms of filial psychosocial competences is the democratic one, as it is more participatory and effective in terms of supporting and demanding developmentally appropriate filial behaviors [24]. Indeed, the findings align with the expected norms for externalizing behavior among students, which supports the observed results. However, the analysis of correlations between the TMMS-24 items and the branch variables indicates that there is a weak and inconsistent relationship between emotional attention and prosocial behavior. This lack of strong correlation might suggest that the TMMS-24's focus on emotional reflection does not directly translate into measurable impacts on prosocial tendencies. It is possible that while individuals might engage in self-reflection about their moods, this process may not significantly influence their prosocial Additionally, the multifactor ANOVA test corroborates the absence of a substantial link between the variables, reinforcing the notion that other factors might be at play. It could be hypothesized that variables such as situational context, individual differences in emotional regulation

strategies, or external influences might be contributing to the weak relationship observed, warranting further exploration to fully understand these dynamics.

In support of our data, we can mention the study by Van der Store [27], who reported that the parental effects of the mother and the father on the child's prosociality were significant, although by small values (r father = 0.10 and r mother = 0.12) and did not differ significantly. This is a weakness that has also been found in several studies to the point that, although the relationship between parenting style and filial prosociality is considered close, these results among adolescents are rather poor [53] considering that other variables such as stress and instability of emotions intervene [18,38]. Hein's study found that children with a greater ability to control their emotions were more empathetic and prosocial [37].

Educational Implications

In synergy with the educational center, the family must test itself with the educational model applied, to identify itself the strengths and weaknesses in the filial interaction. This awareness can only produce a better quality both in the daily relationship and in the lives of the actors themselves. Family must set the goal of improving their educational strategies to improve the intrapersonal and interpersonal skills of their children. Besides, school must also assume the great task of training, administering tests and questionnaires to control the psycho-emotional state of the students, to intervene in time at the first signs of discomfort. In this scenario, knowing the levels of emotional attention of Italian families and the social and prosocial competencies of their daughters and sons will help to develop comparative studies with other countries. Looking at the more practical aspect, the information contained in this research regarding the relationship between the variables will help to design prevention and intervention programs that are more adjusted to reality, promoting coping strategies in students to function in social environments, manage stress situations derived from these contexts and ultimately improve school and family coexistence to control the psycho-emotional state of the students, in order to intervene in time at the first signs of discomfort. Knowing the levels of emotional attention of Italian families and the social and prosocial competencies of their daughters and sons will help to develop comparative studies with other countries. As for the more practical aspect, the information contained in this research regarding the relationship between the variables will help to design prevention and intervention programs that are more adjusted to reality, promoting coping strategies in students to function in social environments, manage stress situations derived from these contexts and ultimately improve school and family coexistence [53].

Limitations and Future Lines of Research

The present study acknowledges several limitations and suggests avenues for future research to advance our understanding of psychosocial competencies. One significant

limitation is the cross-sectional nature of the study, which restricts the ability to capture the dynamic development of psychosocial skills over time. While the research effectively identifies certain variables associated with psychosocial competencies, it falls short of exploring how these variables interact and evolve throughout an individual's development. Additionally, the role of social media, which becomes increasingly influential during adolescence, was not extensively examined in this study.

To address this, future research should employ longitudinal designs to track the progression of psychosocial skills and identify which factors significantly influence their development over time. Such studies could offer valuable insights into how these skills mature and how early interventions might impact long-term outcomes. Social media's impact on psychosocial competencies warrants further investigation, as it could provide a critical understanding of how digital interactions affect the development and expression of these skills. Future research should incorporate those longitudinal approaches that consider the evolving role of social media in shaping psychosocial competencies.

Conclusion

This study examined the complex relationships between emotional attention, social inclusion, and prosocial behavior among students, providing valuable insights into their interplay and implications for psychosocial development. The analysis revealed that emotional attention, as assessed by the TMMS-24, did not exhibit a significant correlation with social inclusion or prosocial behavior, indicating that while emotional attention is crucial for overall psychosocial functioning, its direct impact on social inclusion and prosociality might be less pronounced than anticipated. Although social inclusion showed a moderate correlation with prosocial behavior, this relationship was weak and lacked statistical significance in several analyses, suggesting that social inclusion alone may not be a strong predictor of prosocial behavior. The study also underscored the pivotal role of the family environment in shaping psychosocial skills, highlighting that effective parenting, marked by emotional awareness and self-regulation, significantly influences children's engagement in prosocial behaviors. The findings emphasize the necessity of a more nuanced understanding of these dynamics, suggesting that while emotional attention and social inclusion are important, other factors and contextual variables likely play a critical role in fostering prosocial behavior. Future research should focus on exploring these additional factors and examining how they interact with emotional attention and social inclusion to better inform strategies for enhancing psychosocial competencies in individuals.

Acknowledgement: We would like to thank the families, adolescents, and participating school for their collaboration, which was essential for the development of this research.

Funding Statement: The authors received no specific funding for this study.

Author Contributions: Conceptualization: Catalda Corvasce, Juan Pedro Martínez-Ramón, and Lidia Pellicer-García; methodology: Catalda Corvasce; formal analysis: Juan Pedro Martínez-Ramón and Francisco Manuel Morales-Rodríguez; software and validation: Inmaculada Méndez and Cecilia Ruiz-Esteban; investigation: Catalda Corvasce, Juan Pedro Martínez-Ramón, and Lidia Pellicer-García; resources: Lidia Pellicer-García; data curation: Catalda Corvasce; writing original draft preparation, Catalda Corvasce, Juan Pedro Martínez-Ramón and Lidia Pellicer-García; writing-review and editing: Juan Pedro Martínez-Ramón and Francisco Manuel Morales-Rodríguez; visualization: Inmaculada Méndez and Cecilia Ruiz-Esteban; supervision: Juan Pedro Martínez-Ramón and Lidia Pellicer-García; project administration: Juan Pedro Martínez-Ramón, and Lidia Pellicer-García All authors reviewed the results and approved the final version of the manuscript.

Availability of Data and Materials: Data will be available upon justified request.

Ethics Approval: The study was approved by the Ethics Committee at the University of Murcia (IRB number: 2821/2020). All participants signed the informed consent in this study.

Conflicts of Interest: The authors declare that they have no conflicts of interest to report regarding the present study.

References

- Hassoun A, García G, Trollman H, Jagtap S, Parra-López C, Cropotova J, et al. Birth of Dairy 4.0: opportunities and challenges in adoption of fourth industrial revolution technologies in the production of milk and itsderivatives. Current Res Food Sci. 2023;7(1):100535. doi:10.1016/j.crfs.2023. 100535.
- Kurzweil R. The singularity is nearer: when we merge with AI. New York, US: Random House; 2024.
- Freccero C. Propaganda. Umanità e ragione. 2022 aprile
 Available from: https://umanitaeragione.eu/2022/04/07/la-propaganda/. [Accessed 2024].
- 4. Gagan D, Jyoti V. Embracing the future: AI and ML transform urban environments into smart cities. J Artif Intell. 2023;5:57–73. doi:10.32604/jai.2023.043329.
- Patnaik L, Wang W. Equity in artificial intelligence: from machine learning to federated learning. Comput Model Eng Sci. 2024;139(2):1203–15. doi:10.32604/cmes.2023.029451.
- 6. Nadeem E, Van Meter AR. The impact of the COVID-19 pandemic on adolescents: an opportunity to build resilient systems. Am J Health Promot. 2023;37(2):274–81.
- Martínez-Monteagudo MC, Inglés CJ, García-Fernández JM. Assessment of school anxiety: a review of questionnaires, inventories and scales. Psicol Educ. 2013;19(1):27–36. doi:10. 5093/ed2013a5.
- Goleman D. Emotional intelligence. England: Bloomsbury Publishing; 2020.
- Capacchi C. Neoliberalism has failed. Visione; 2024 Oct 1. Available from: https://visioneditore.it/prodotto/il-neoliberismo-ha-fallito-visione-10-2024/. [Accessed 2024].

- Alves AF, Gomes CM, Martins A, Almeida LS. Cognitive performance and academic achievement: how do family and school converge? Eur J Educ. 2017;10(2):49–56. doi:10.1016/j. ejeps.2017.07.001.
- 11. Benavides-Lara MA. Youth, human development and higher education: a desirable and possible linkage. Rev Iberoam de Educ Super. 2015;6(16):165–73. doi:10.1016/j.rides.2015.03.002.
- 12. Steinberg L. We know some things: parent-adolescent relationshipsin retrospect and prospect. J Res Adolesc. 2001;11(1):1–19. doi:10.1111/1532-7795.00001.
- Coplan RJ, Hastings PD, Lagace-Seguin DG, Moulton CE. Authoritative and authoritarian mothers' parental goals, attributions and emotions across different childrearing contexts. Parenting Sci Pract. 2002;2(1):1–26. doi:10.1207/ S15327922PAR0201_1.
- 14. Blair BL, Perry NB. Parental sensitivity and friendship development: the mediating role of cooperation. Int J Soc Dev Res. 2019;28(1):106–19. doi:10.1111/sode.12332.
- 15. Craig CM, Brooks ME, Bichard S. Prosocial consumer socialization: how socialization agents impact prosocial attitudes and behavior. Atl J Commun. 2021;29(3):136–50.
- 16. Amrisha V, Hepach R. The development of prosocial emotions. Emot Rev. 2020;12(4):259–73. doi:10.1177/1754073919885014.
- Paley B, Hajal NJ. Conceptualizing emotion regulation and coregulation as family-level phenomena. Clin Child Fam Psychol Rev. 2022;25(1):19–43. doi:10.1007/s10567-022-00378-4.
- 18. De la Barrera U, Villanueva L, Montoya-Castilla I, Pardo-Gascó V. How much emotional attention is appropriate? The influence of emotional intelligence and subjective well-being on adolescents' stress. Curr Psychol. 2023;42(6):5131–43. doi:10. 1007/s12144-021-01763-y.
- 19. Fonseca-Pedrero E, Ortuño Sierra J, Perez-Albeniz A. Emotional and behavioural difficulties and prosocial behaviour in adolescents: a latent profile analysis. Rev Psiquiatr Salud Ment. 2020;13(4):202–12. doi:10.1016/j.rpsm.2020.01.002.
- Davis AN, McGinley M, Carlo G. Examining discrimination and familism values as longitudinal predictors of prosocial behaviors among recent immigrant adolescents. J Int Behav Dev. 2021;45(4):317–26. doi:10.1177/01650254211005561.
- 21. Bülow A, Keijsers L, Boele S, van Roekel E, Denissen JJ. Parenting adolescents in times of a pandemic: changes in relationship quality, autonomy support, and parental control? Dev Psychol. 2021;57(10):1582–96. doi:10.1037/dev0001208.
- Steinberg L, Lamborn SD, Darling N, Mounts NS, Dornbusch SM. Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. Child Dev. 1994;65(3):754. doi:10.2307/ 1131416.
- Ding X, Zheng L, Liu Y, Zhang W, Wang N, Duan H, et al. Parenting styles and psychological resilience: the mediating role of error monitoring. Biol Psychol. 2023;180(6):108587. doi:10.1016/j.biopsycho.2023.108587.
- Rothrauf TC, Cooney TM, Shin AJ. Remembered parenting styles and adjustment in middle and late adulthood. J Gerontol. 2009;64(1):137–46. doi:10.1093/geronb/gbn008.
- 25. Farrant BM, Devine TAJ, Maybery MT, Fletcher J. Empathy, perspective taking and prosocial behaviour: the importance of parenting practices: empathy, parenting and prosocial behaviour. Infant Child Dev. 2012;21(2):175–88. doi:10.1002/icd.740.

- Hastings PD, Nuselovici JN, Rubin KH, Cheah C. Shyness, parenting, and parent-child relationships. In: Rubin KH, Coplan RJ, editors. The development of shyness and social withdrawal. New York: Guilford Press; 2010. p. 107–30.
- Van der Storm L, Van Lissa CJ, Lucassen N, Helmerhorst K, Keizer K. Maternal and paternal parenting and child prosocial behavior: a meta-analysis using a structural equation modeling design. J Marriage Fam. 2022;58(1):1–37. doi:10.1080/ 01494929.2021.1927931.
- 28. Hinnant BJ, Erath SA, Shimizu M, El-Sheikh M. Parenting, deviant peer affiliation, and externalizing behavior during adolescence: processes conditional on sympathetic nervous system reactivity. J Child Psychol Psychiat. 2019;60(7): 793–802. doi:10.1111/jcpp.13046.
- 29. Eisenberg N, Hofer C, Sulik MJ, Spinrad TL. Self-regulation, effortful control, and their socioemotional correlates. In: Gross JJ, editor. Handbook of emotion regulation. 2nd ed. New York: The Guilford Press; 2014. p. 157–72.
- Rothbart MK. Temperament, development, and personality. Soc Psychol. 2007;16(4):207–12. doi:10.1111/j.1467-8721.2007. 00505.x.
- 31. Ryan RM, Deci E. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. Am Psychol. 2000;55(1):68–78. doi:10.1037/0003-066X.55.1.68.
- Eisenberg N, Guthrie IK, Reiser M, Murphy AC, Holgren R, Maskk P, et al. The relations of regulation and emotionality to resiliency and competent social functioning in elementary school children. Child Dev. 1997;68(2):295–311. doi:10.2307/ 1131851.
- 33. Eisenberg N, Spinrad TL, Fabes RA, Reiser M, Cumberlan A. The relations of effortful control and impulsivity to children's resiliency and adjustment. Child Dev. 2004;75(1):25–46. doi:10. 1111/j.1467-8624.2004.00652.x.
- 34. Romeo FP. False parental myths and dis-educational legacies. Riv Ital Ed Fam. 2021;1:301–15. doi:10.36253/rief-8566.
- 35. Shabbir F, Ishaq K. Impact of perceived parenting style and emotional intelligence on communication Competence among Adolescents. J Psych. 2019;4(3):1–21.
- García MC, Lendínez J, Pelegrina S. Parents' educational styles and adolescents' psychosocial competence. Anu de Psicol. 2002;33(1):79–96.
- 37. Hein S, Roder M, Fingerle M. The role of emotion regulation in situational empathy-related responding and prosocial behaviour in the presence of negative affect. Inter J Psychol. 2018;53(6):477–85. doi:10.1002/ijop.12405.
- 38. Benita M, Levkovitz T, Roth G. Integrative emotion regulation predicts adolescents' prosocial behavior through the mediation

- of empathy. Learn Instr. 2017;50(1):14–20. doi:10.1016/j. learninstruc.2016.11.004.
- Vecchio MG, Gerbino M, Di Giunta L, Castellani V, Pastorelli C. Moral functioning and prosocial behaviour: values, reasoning and moral 'Agenticity'. Psicol Educ. 2008;2:35–54.
- 40. Cipriani R. Responsibility and pro-sociality education. Available from: https://www.ciprianiroberto.it/2020/12/17/responsabilitaed-educazione-alla-pro-socialita/. [Accessed 2024].
- 41. Gambini P. TCS-A: test on overcoming tasks in adolescence. Trento: Erickson; 2015.
- 42. Bandura A. Self-efficacy mechanism in human agency. Am Psychol. 1982;37:122–47. doi:10.1037/0003-066X.37.2.122.
- 43. Erikson EH. Children and society. Roma: Armando; 1999.
- 44. Teenagers AT. Neither adults nor children, in search of their own identity. Bologna: IL Mulino; 2001.
- 45. Blos P. The second individuation process of adolescence. Psychoanal Stud Chil. 1967;22:162–86.
- Zimmerman MA, Bingenheimer JC, Notaro PC. Natural mentors and adolescent resiliency. A study with urban youth. Am J Community Psychol. 2002;30:221–43.
- 47. Goodman R. The strengths and difficulties questionnaire: a research note. J Child Psychiat. 1997;38:581–6.
- Tobia V, Gabriele MA, Marzocchi GM. The Italian version of the strengths and difficulties questionnaire (SDQ)—teacher: psychometric properties. J Psychoed Assess. 2013;31(5): 493–505. doi:10.1177/0734282912473456.
- Salovey P, Mayer JD, Goldman SL, Turvey C, Palfai TP. Emotional attention, clarity, and repair: exploring emotional intelligence using the trait meta-mood scale. In: Pennebaker JW, editor. Emotion, disclosure, and health. Washington, D.C: American Psychological Association; 1995. p. 125–54. doi:10. 1037/10182-006.
- 50. Giromini L, Colombarolli MS, Brusadelli E, Zennaro A. An Italian contribution to the study of the validity and reliability of the trait meta-mood scale. J Ment Health. 2017;26(6):523–9. doi:10.1080/09638237.2017.1340621.
- 51. Rizzolatti G, Sinigaglia S. I know what you do. The acting brain and mirror neurons. Milano, Italia: Cortina; 2006.
- 52. Carlo G, McGinley M, Hayes R, Batenhorst C, Wilkinson J. Parenting styles or practices? Parenting, sympathy, and prosocial behaviors among adolescents. J Genet Psychol. 2007;168(2):147–76. doi:10.3200/GNTP.168.2.147-176.
- Corvasce C, Martínez-Ramón JP, Méndez I, Ruiz-Esteban C, Morales-Rodríguez FM, García-Manrubia MB. Emotional strengths and difficulties in Italian adolescents: analysis of adaptation through the SDQ. Sustainability. 2022;14(10):6167. doi:10.3390/su14106167.