



## Research Article

# Psychometric properties of the emotional self-efficacy and prosocial behavior scales among Nigerian youths: A cross-cultural validation study

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### Abstract

This study examined the psychometric properties of the Emotional Self-Efficacy and Prosocial Behavior scales, originally developed in Italy, among Nigerian youths residing in urban and semi-urban contexts. A total of 108 participants completed measures assessing empathic ability, problem-solving, and interpersonal communication, alongside the Prosocial Tendencies Measure, which captures helping behaviors across anonymous, public, and emotionally salient situations. The findings demonstrated acceptable internal consistency across all scales, indicating satisfactory reliability within this cultural context. Descriptive analyses showed generally low levels of empathic and problem-solving self-efficacy, while interpersonal communication self-efficacy ranged from low to high. Correlational analyses revealed that empathic, problem-solving, and interpersonal communication self-efficacy were positively associated with prosocial behaviors, particularly in emotionally demanding contexts. Additionally, empathic and problem-solving self-efficacy were positively related to public prosocial actions. Overall, the findings provide preliminary evidence supporting the cross-cultural applicability of these instruments among Nigerian youths and highlight culturally relevant patterns in self-efficacy and prosocial functioning. The study contributes to the limited literature on psychological resources and prosocial development in Sub-Saharan Africa. Future research should employ larger and more diverse samples and explore the roles of resilience, personality traits, and value orientations in shaping prosocial behavior.

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## Introduction

This paper examines two central constructs in youth psychology, emotional self-efficacy and prosocial behavior within the developmental context of Nigerian adolescents. While substantial research has investigated these constructs in Western and Asian populations (e.g., Caroli & Sagone, 2013), little is known about their interaction in sub-Saharan Africa, particularly Nigeria. This study addresses that gap by testing whether established relationships generalize to this cultural context.

Emotional self-efficacy refers to the perceived ability to understand, regulate, and act upon emotional cues in oneself and others. Among Nigerian youths, this skill is crucial for navigating complex social, familial, and school environments that are often both emotionally and structurally demanding. Empathic self-efficacy, in particular, has been strongly linked to prosocial behavior (Caprara & Steca, 2005; Caprara et al., 2012). Studies such as Azimpour et al. (2012) also show that empathy is positively correlated with compliant, emotional, anonymous, and altruistic behaviors, but

negatively with public helping. These findings raise important questions about how prosocial behavior is shaped in Nigeria, where traditional values, religious doctrines, and community-based expectations exert strong influence.

In Nigeria's educational and social settings, emotional self-efficacy contributes not only to personal well-being but also to social relationships and group cohesion. Adolescents with higher emotional self-efficacy are more likely to engage in helping, sharing, cooperating, and comforting behaviors, thereby fostering inclusive and cohesive communities. Schools, religious institutions, and peer networks serve as key developmental spaces where Nigerian youths acquire emotional regulation, resilience, and collaboration skills. Evidence suggests that emotionally competent youths are better able to handle academic stress, resolve conflicts peacefully, and express empathy (Bailey et al., 2021; Bartuseviciene et al., 2023). In Nigeria's competitive academic environment and rapidly shifting social landscape, these abilities are vital for both academic engagement and emotional well-being. Integrating emotional self-efficacy into education and youth programs is therefore essential for nurturing socially responsible and emotionally resilient individuals.

The significance of emotional self-efficacy extends beyond individual development to policymaking, curriculum design, and youth empowerment. Understanding its role in prosocial behavior enables educators, youth workers, and policymakers to design interventions, such as emotional literacy curricula, peer mentoring, and teacher training, that encourage empathy, cooperation, and civic responsibility. In the long term, these efforts prepare adolescents to become adults who promote workplace collaboration, community solidarity, and ethical leadership (Faisal, 2018; Khorram-Manesh et al., 2023). By situating this inquiry within Nigeria, the study contributes to cross-cultural psychology and addresses the underrepresentation of African contexts in emotional intelligence research. It explores how emotional self-efficacy shapes prosocial behavior among Nigerian youths and offers culturally relevant recommendations for strengthening emotional development. Ultimately, this work underscores the importance of fostering both emotional well-being and prosocial engagement in preparing Nigeria's next generation of leaders.

### **Literature Review**

Prosocial behavior, defined as voluntary actions intended to benefit others, has been widely studied in developmental and educational psychology. According to Carlo and Randall (2002) and Getlik (2023), prosocial behaviors can be categorized into six types: public (helping to gain approval), anonymous (help without recognition), dire (aid in emergencies), emotional (triggered by intense circumstances), compliant (responding to requests), and altruistic (without expectation of personal gain). These categories offer insight into how adolescents express concern for others in both structured and informal environments.

Research in Nigeria highlights gender and age differences in prosocial behaviors: female adolescents tend to score higher in emotional, anonymous, and altruistic helping, while males show more public prosocial behavior. Such patterns reflect sociocultural expectations, religious norms, and traditional gender roles. Within Nigeria, prosocial tendencies are also shaped by communal living, extended families, and moral teachings embedded in schools and religious institutions (Ameh et al., 2020). The development of prosocial behavior during adolescence is closely tied to empathy, particularly its cognitive aspect, perspective-taking, which predicts emotional and altruistic helping (Roberts & Strayer, 1996). Moral reasoning and the internalization of cultural and religious values, strongly emphasized in Nigerian households and schools, further mediate prosocial engagement (Adeniji et al., 2015). Self-efficacy, defined by Bandura (1986) as the belief in one's capacity to execute behaviors to achieve desired outcomes, is central to understanding prosocial behavior. It spans academic, emotional, and social domains, with emotional self-efficacy (ESE) particularly salient for Nigerian adolescents facing socio-economic pressures, peer influence, and academic expectations. Caprara (2001) identifies three ESE dimensions: empathic self-efficacy (understanding/responding to others' emotions), problem-solving self-efficacy, and interpersonal communication self-efficacy.

Gender differences are notable: females report higher empathic self-efficacy, while males exhibit greater confidence in problem-solving (Olusegun et al., 2014). Investigating these trends in Nigeria is crucial, given the distinct cultural expectations and emotional norms compared to Western societies. Emotional self-efficacy enables adolescents to

recognize, regulate, and act on emotional cues, influencing both academic performance and social interactions (V & Venukapalli, 2023; Fatikasari et al., 2023). It shapes confidence, motivation, and adaptability, making it vital for coping with stress, peer challenges, and competitive academic environments (Rosada et al., 2018; Sun & Lyu, 2022; Al-Rahmi et al., 2019). Several theories explain how emotional self-efficacy develops, particularly in educational contexts. Social Cognitive Theory (Bandura) emphasizes learning through observation, imitation, and reinforcement from emotionally competent role models (Douglas Kauffman et al., 2023; Seth, 2018). Emotional Regulation Theory highlights self-awareness and adaptive coping strategies (Laulié et al., 2023), while Cognitive Behavioral Theories stress modifying dysfunctional thought patterns to enhance emotional and social competence (Bel-Fenellós et al., 2023; Chen & Yang, 2022). Self-Determination Theory links ESE with intrinsic motivation, asserting that autonomy, competence, and social connectedness foster emotional growth (El-Bassiouny & El-Naggar, 2023). Studies show that low ESE correlates with emotional distress and academic disengagement, while supportive educational climates enhance emotional competencies (Kaushal & Singh, 2023; Douglas Kauffman et al., 2023).

Prosocial behavior also plays a vital role in academic and social development, promoting cooperation, classroom harmony, and emotional safety (Cardona-Isaza et al., 2023). It is shaped by biological traits, cultural influences, and learned experiences (Su & Hahn, 2023). Theories explaining prosociality include Social Exchange Theory (cost-benefit perspective), Empathy-Altruism Theory (emotional concern), and Cultural Norms Theory (societal values guide behavior) (Ayla Nayebi, 2023; Nupen & Jagernath, 2022; Tripp, 2023; Kago & Venkataraman, 2023; Y. I. Lee et al., 2023; Luqman et al., 2023; Nnenna et al., 2023). Empirical evidence links higher self-efficacy to increased prosocial engagement, fostering inclusive school environments (Patrick Vermeren, 2020; Schwartz & Gottlieb, 1976; Xiao et al., 2023). Moral identity predicts helping behaviors, and supportive families encourage prosocial development (Renee B Patrick, 2018; Dina Said Bazadough & Bahjat Abu Sulaiman, 2023). The Prosocial Classroom Model underscores the role of teacher competencies in modeling prosocial behaviors, consistent with Bandura's observational learning framework (Firmansyah Sukabumi, 2022; Getlík, 2023).

In summary, the literature indicates a dynamic, reciprocal relationship between emotional self-efficacy and prosocial behavior. For Nigerian adolescents, whose development is shaped by complex cultural, social, and economic factors, understanding this relationship is essential. Although prior studies provide a foundation, there remains a need for culturally specific research exploring how emotional competencies and prosocial motivations interact within Nigeria's unique educational and social environments. Addressing this gap will inform policy, interventions, and pedagogy aimed at nurturing emotionally intelligent and socially responsible Nigerian youths.

### **Purpose of the Study**

This study aimed to investigate how empathic, problem-solving, and interpersonal communication self-efficacy relate to prosocial tendencies among Nigerian youths. It was hypothesized that youths with higher self-efficacy would exhibit greater prosocial behavior, particularly in emotionally critical and anonymous contexts. Furthermore, it was expected that female participants would score higher in empathic and emotional helping, while males would report higher in public prosocial behavior.

## **Methodology**

### **Participants**

This study involved a total of 108 Nigerian youths who participated by completing an online survey administered via Google Forms and SurveyMonkey. Participants were diverse in age and gender, allowing for analysis across key demographic subgroups. This sample represents a new demographic of interest, extending prior research conducted in other cultural contexts. The study was conducted as a direct replication of the methodology used by De Caroli and Sagone (2013) in their research on Italian adolescents. The primary aim was to examine the psychometric properties of the emotional self-efficacy and prosocial behavior scales within a Nigerian context, a population that has not previously

been studied in this manner. All procedures, including the selection of scales, survey administration, and data collection methods, were closely modeled on the original study to ensure methodological consistency. The only adaptations involved contextualizing the language and examples for Nigerian youths while maintaining the structure and scoring of the original instruments, allowing for meaningful cross-cultural comparison.

A convenience sampling method was employed, targeting Nigerian youths accessible through online networks. This approach enabled efficient data collection while ensuring representation across gender and age categories.

### **Data Collection Tools**

The survey instruments included adaptations of historically significant psychological scales, which are now in the public domain and did not require formal permission from the original authors. Nonetheless, proper academic citations and acknowledgments were maintained in accordance with ethical research standards. Three self-efficacy scales were administered: Empathic Self-Efficacy Scale, the Problem-Solving Self-Efficacy Scale, and the Interpersonal Communication Self-Efficacy Scale. The adaptation process involved translating and modifying items to reflect Nigerian linguistic and cultural contexts, expert review by psychologists familiar with Nigerian youth development, and pilot testing to ensure item clarity and relevance. Psychometric validation was conducted through reliability analyses, including the calculation of Cronbach's alpha for internal consistency.

#### **The Empathic Self-Efficacy Scale**

The Empathic Self-Efficacy Scale consisted of 12 items rated on a 5-point Likert scale ranging from 1 (not at all efficient) to 5 (completely efficient), with a Cronbach's alpha of .71. An example item is: "How well can you experience how a person in trouble feels?"

#### **The Problem-Solving Self-Efficacy Scale**

The Problem-Solving Self-Efficacy Scale included 14 items rated on a 7-point Likert scale (1 = not at all efficient; 7 = completely efficient) with a Cronbach's alpha of .79. An example item is: "How well can you find new solutions to problems?"

#### **The Interpersonal Communication Self-Efficacy Scale**

The Interpersonal Communication Self-Efficacy Scale contained 19 items rated on a 7-point Likert scale (1 = not at all efficient; 7 = completely efficient) with a Cronbach's alpha of .79. An example item is: "How well can you take into consideration viewpoints different from your own?" In addition, the study employed the 22-item Prosocial Tendencies Measure (PTM; Carlo & Randall, 2002), originally developed to assess six types of prosocial behavior in college students. For this study, the measure was adapted for Nigerian adolescents and focused on three main factors: anonymous behavior (Cronbach's  $\alpha = .79$ ), public behavior (Cronbach's  $\alpha = .81$ ), and helping behavior in emotionally critical and dire situations (Cronbach's  $\alpha = .80$ ). Items were rated on a 5-point Likert scale ranging from 1 (does not describe me at all) to 5 (describes me very well). Examples of adapted items include: "I think that helping others without them knowing is the best type of situation" for anonymous behavior, "I can help others best when people are watching me" for public behavior, and "I tend to help people who are in real crisis or need" for helping behavior in critical or emotional situations. Ethical approval for the study was obtained from the Isik University Ethics Committee. All participants completed the survey anonymously, and informed consent was obtained online prior to participation. These procedures ensured confidentiality, voluntary participation, and adherence to ethical standards for research involving human subjects.

### **Data Analysis**

All collected data were analyzed using Strata. Pearson correlation coefficients were calculated to determine the strength and direction of relationships between emotional self-efficacy and prosocial behavior. Independent sample t-tests and Chi-square tests were conducted to examine the influence of age and gender on the primary variables, allowing for a nuanced understanding of how demographic factors intersect with emotional regulation and helping behaviors among Nigerian youths.

## Results

The analysis of self-efficacy revealed striking differences across the three domains. When it came to empathic self-efficacy, nearly half of the adolescents (46.3%) fell into the *low* category, while only about a quarter (24.1%) scored in the *medium* range, and just under one-third (29.6%) placed in the *high* category. This uneven spread produced a significant departure from chance expectations ( $\text{Chi}^2 = 8.67$ ,  $\text{df} = 2$ ,  $p = .013$ ), indicating that empathy-related confidence was skewed toward the lower end. The picture was even more pronounced for problem-solving self-efficacy: more than half of the respondents (55.6%) rated themselves low, with a much smaller share in the medium (20.4%) and high (24.1%) groups. The imbalance was so sharp that the chi-square test yielded a highly significant result ( $\text{Chi}^2 = 24.22$ ,  $\text{df} = 2$ ,  $p < .001$ ), highlighting that weak problem-solving confidence was a dominant theme among the youth. By contrast, interpersonal communication self-efficacy told a more complex story. Here, the distribution was somewhat more balanced, with 38% low, 21.3% medium, and 40.7% high. This split nevertheless still differed significantly from uniform expectations ( $\text{Chi}^2 = 7.17$ ,  $\text{df} = 2$ ,  $p = .03$ ), showing that communication self-efficacy tended to cluster at the extremes rather than the middle. When broken down by sex and age, the overall picture held steady: most adolescents consistently reported *low* self-efficacy in empathy and problem solving, while their sense of efficacy in communication varied dramatically, often swinging between very low and very high, with fewer lingering in the moderate zone. Significant correlations emerged among the three self-efficacy domains (Table 1). Adolescents who perceived themselves as empathically competent also reported higher problem-solving and interpersonal communication self-efficacy, and vice versa. Moreover, those with stronger problem-solving self-efficacy tended to report better interpersonal communication skills.

**Table 1.** Relationship between the self-efficacy measures

Self-efficacy	Empathy	Problem Solving	Interpersonal Communication
Empathy	1	.48*	.41*
Problem Solving	.48*	1	.44*
Interpersonal Communication	.41*	.44*	1

Significance:  $p < .05$ .

A factorial analysis of the 22-item Prosocial Tendencies Measure (PTM) was conducted using Principal Components Analysis with Varimax rotation (eigenvalues  $> 1$ ). Three factors were identified:

- Helping behavior in emotionally critical and dire situations (10 items: 2, 4, 6, 7, 9, 12, 14, 17, 18, 21), accounting for 23.6% of the variance.
- Public prosocial behavior (7 items: 1, 3, 5, 10, 13, 16, 20), accounting for 14.5% of the variance.
- Anonymous prosocial behavior (5 items: 8, 11, 15, 19, 22), accounting for 9.4% of the variance.

**Table 2.** Factor loadings for prosocial tendencies measure

Items	F1	F2	F3
I tend to help people who hurt themselves badly (item 9)	.76		
It is most fulfilling to me when I can comfort someone who is very distressed (item 2)	.68		
I never hesitate to help others when they ask for it (item 18)	.64		
I tend to help others particularly when they are emotionally distressed (item 12)	.63		
I tend to help people who are in a real crisis or need (item 6)	.62		
When people ask me to help them, I don't hesitate (item 7)	.62		
It is easy for me to help others when they are in a dire situation (item 14)	.61		
Emotional situations make me want to help needy others (item 21)	.58		
I respond to helping others best when the situation is highly emotional (item 17)	.40		
I think that one of the best things about helping others is that it makes me look good (item 4)	.35		
Helping others when I am in the spotlight is when I work best (item 13)		.78	
When other people are around, it is easier for me to help needy others (item 3)		.70	
I get the most out of helping others when it is done in front of others (item 5)		.69	
One of the best things about doing charity work is that it looks good on my resume (item 20)		.67	
I can help others best when people are watching me (item 1)		.67	
I believe I should receive more recognition for the time and energy I spend on charity work (item 16)		.61	
I believe that donating goods or money works best when it is a benefit for the giver (item 10)		.44	
I think that helping others without them knowing is the best type of situation (item 19)			.77
Most of the time, I help others when they do not know who helped them (item 15)			.76
I tend to help needy others most when they do not know who helped them (item 11)			.69
I prefer to donate money anonymously (item 8)			.67
I often make anonymous donations because they make me feel good (item 22)			.66

F1: Factor 1, F2: Factor 2 F3: Factor 3

Positive correlations were observed among the factors: public prosocial and helping behavior in critical situations ( $r(108) = .21, p = .03$ ), anonymous and helping behavior ( $r(108) = .22, p = .02$ ), and anonymous and public behavior ( $r(108) = .40, p < .001$ ). Sex and age differences emerged only for public prosocial behavior: early adolescents reported higher levels than middle adolescents ( $M = 2.82, SD = .81$  vs.  $M = 2.27, SD = .76$ ;  $t(106) = 3.65, p < .001$ ), and boys scored higher than girls ( $M = 2.70, SD = .83$  vs.  $M = 2.34, SD = .80$ ;  $t(106) = 2.24, p = .03$ ).

Correlations between self-efficacy and prosocial behavior indicated that higher self-efficacy in problem solving, empathy, and interpersonal communication was associated with greater engagement in helping behavior in emotionally critical and dire situations. Problem-solving and empathic self-efficacy were also positively related to public prosocial behavior (Table 3). These results suggest that adolescents who perceive themselves as more capable in these domains are more likely to act prosocially, particularly in critical and public contexts.

**Table 3.** Correlations between self-efficacy and prosocial behaviors

Self-efficacy	Factor 1	Factor 2	Factor 3
Empathy	.51*	.20**	.08
Problem Solving	.36*	.33*	.12
Interpersonal Communication	.48*	.08	.06

Significance:  $p < .001, p < .05$

## Discussion

The findings of this research mirror those of Caroli and Sagone (2013), extending their applicability to Nigerian adolescents. While the patterns were similar, the relatively higher proportion of low problem-solving self-efficacy in our sample may reflect contextual factors unique to Nigeria's educational and social environment. In particular, the Nigerian school system often emphasizes rote learning and conformity rather than creative problem-solving, which may inhibit adolescents' confidence in tackling novel or complex challenges. Furthermore, limited access to learning

resources, overcrowded classrooms, and high-stakes examinations could contribute to lower self-perceived problem-solving efficacy.

The topics of self-efficacy and prosociality were central to this study conducted with Nigerian youths. Given the specificity of self-efficacy (Bandura, 1997) and the limited research examining its role in prosocial behavior within the Nigerian context, three key aspects of perceived personal efficacy were examined: (1) the ability to understand and respond to others' emotions (empathic self-efficacy), (2) the ability to address problems creatively and effectively (problem-solving self-efficacy), and (3) the ability to communicate efficiently and cooperatively in group settings (interpersonal communication self-efficacy).

Based on prior research (Caroli & Sagone, 2013), it was hypothesized that girls would score higher than boys in empathic and interpersonal communication self-efficacy but lower in problem-solving self-efficacy. Contrary to these expectations, the results revealed no significant differences in self-efficacy across sex or age groups. This finding may reflect evolving gender dynamics in Nigeria, where traditional roles are being reshaped by increased educational opportunities for girls and shifting family expectations. As more Nigerian girls gain access to higher-quality schooling and extracurricular opportunities, gendered differences in emotional and social competencies may be diminishing.

For prosociality, this study employed a modified version of the Prosocial Tendencies Measure (Carlo & Randall, 2002; Caroli & Sagone, 2013), originally designed to assess six types of prosocial behavior (anonymous, public, emotional, compliant, dire, and altruistic). The aim was to test whether this six-factor structure held for Nigerian youths. Factorial analysis instead supported a three-factor structure: "helping behavior in emotionally critical and dire situations," "public prosocial behavior," and "anonymous prosocial behavior." This simplified structure may reflect cultural realities in Nigeria, where communal living and interdependence shape how prosocial tendencies are expressed. Consistent with previous findings (Ameh et al., 2020), girls were expected to display more emotional and anonymous prosocial behaviors, while boys would show greater public prosocial behavior. The results partially confirmed this pattern: boys exhibited higher public prosocial behavior than girls, and early adolescents reported more public prosocial behavior than middle adolescents. One possible explanation is that Nigerian boys, particularly in early adolescence, are often socialized to perform acts of help in public as a way of gaining recognition and affirming masculine roles within peer groups. By contrast, anonymous or emotionally driven prosocial behaviors may be less visible and therefore less aligned with cultural expectations for boys.

The primary aim of this study was to explore the relationships between empathic, problem-solving, and interpersonal communication self-efficacy and prosocial tendencies. It was predicted that youths with higher self-efficacy would be more likely to engage in prosocial behavior than their lower-efficacy peers. The findings partially supported this hypothesis: adolescents with higher self-efficacy in empathy, problem-solving, and interpersonal communication were more likely to help others in emotionally critical or dire situations and in public contexts. These results align with prior research (Caroli & Sagone, 2013; Fabes et al., 1999; Carlo & Randall, 2002; Carlo et al., 2003; Eklund et al., 2012; Caprara & Steca, 2005), while also highlighting the role of Nigerian cultural and social conditions in shaping self-efficacy and prosociality.

### **Nigerian Cultural and Social Influences**

In Nigeria, cultural values strongly emphasize collectivism, interdependence, and communal responsibility. The extended family system, traditional respect for elders, and religious institutions (both Christian and Islamic) play critical roles in shaping social behavior. Adolescents are often encouraged to prioritize group harmony and social support over individual goals, which may explain the prominence of public and emotionally critical helping behaviors in this study. At the same time, economic instability and social inequalities may challenge adolescents' problem-solving efficacy, as youths are not always empowered with the resources or autonomy to enact solutions to real-world problems.

Religious and moral education is another important cultural factor. In both Christian and Islamic schools, moral instruction emphasizes kindness, generosity, and helping others, reinforcing prosocial tendencies. However, these

teachings may also intersect with gender expectations, where girls are encouraged to be nurturing and boys to demonstrate visible, socially approved acts of help. Thus, Nigerian cultural norms not only foster prosocial behavior but also influence how such behaviors are expressed along gendered lines.

## Recommendations

### Practical Implications

The findings of this study suggest important directions for educational and social interventions in Nigeria:

**Integrating Social-Emotional Learning (SEL):** Schools should incorporate structured SEL programs that build empathic understanding, communication, and problem-solving skills. Such programs could help strengthen self-efficacy across domains and promote balanced prosocial behaviors in both boys and girls.

**Promoting Collaborative Learning:** Classroom strategies that emphasize group work and peer-to-peer learning can provide opportunities for students to practice interpersonal communication and prosocial behaviors in real time.

**Culturally Responsive Pedagogy:** Educational programs must draw on Nigerian cultural strengths—such as communal values and moral teachings—while also challenging restrictive gender stereotypes. For example, encouraging boys to engage in anonymous or emotionally supportive helping, and empowering girls to practice public problem-solving and leadership.

**Teacher Training:** Teachers play a central role in modeling prosocial and self-efficacious behaviors. Professional development should emphasize the importance of emotional self-efficacy, classroom empathy, and constructive problem-solving as tools for both academic and social growth.

**Community and Family Engagement:** Since Nigerian adolescents' socialization is deeply embedded in family and religious institutions, interventions should extend beyond schools. Parenting workshops and faith-based programs can reinforce the development of prosocial competencies at home and in the community.

### Limitations and Future Research

Study limitations include: (1) the need for replication with larger youth samples across different Nigerian states and African countries to ensure representativeness, (2) caution in generalizing findings due to the relatively small sample size and the exploratory validation of the three-factor PTM structure, and (3) the value of longitudinal studies to track developmental changes in prosocial tendencies from early adolescence to young adulthood.

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