



Altruistic Preferences and Empathic Concern among Generation Z Pre-Service Teachers: The Moderating Role of Self-Control

Leny Noviani*, Khofifah Tria Amanda, Leny Kurnia Oktaviani

Department of Economics Education, Faculty of Teacher Training and Education,
Universitas Sebelas Maret, Surakarta, Indonesia.

*Corresponding Author. Email: lenynoviani@staff.uns.ac.id

Abstract: This study aims to analyse the effect of altruistic preferences on empathic concern and examine the moderating role of self-control among Generation Z pre-service teachers. A quantitative approach with a cross-sectional design was employed. The study population comprised 1,833 students enrolled in Economic Education Study Programs at Universitas Sebelas Maret (UNS) and Universitas Negeri Semarang (UNNES). The sample was selected using purposive and proportional random sampling, yielding 177 valid responses. Data were collected through an online Likert-scale questionnaire and analysed using Moderated Regression Analysis (MRA) in SPSS. The results indicate that altruistic preferences have a positive and significant effect on empathic concern ($p < 0.001$). Self-control also has a significant direct effect on empathic concern ($p = 0.028$); however, it does not significantly moderate the relationship between altruistic preferences and empathic concern ($p = 0.762$). These findings suggest that empathic concern among Generation Z pre-service teachers is directly associated with altruistic preferences, whereas self-control does not significantly alter this relationship. The findings provide an empirical basis for strengthening character education and social-emotional competencies in teacher education.

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Introduction

Empathic concern constitutes a fundamental component of pedagogical relationships, enabling teachers to comprehensively understand students' emotional, social, and academic circumstances. Without consistent empathic engagement, the learning process may become merely procedural and insufficiently responsive to students' individual needs. In practice, teachers simultaneously perform diverse responsibilities, ranging from delivering instructional content and establishing positive relationships with students to regulating their emotional reactions in the classroom (Savina et al., 2025). The complexity of these roles requires teachers to maintain the quality of their emotional engagement continuously.

Nevertheless, consistently maintaining empathic concern is challenging because the teaching profession is highly susceptible to emotional pressure. A survey conducted by Yu et al. (2022) revealed that 62% of teachers experienced stress from managing health-related and personal problems during the educational process, placing them at risk of compassion fatigue. Such emotional exhaustion may diminish the quality of empathic engagement, as emotionally exhausted teachers tend to become defensive, less sensitive, and less responsive to students' needs. More concerning findings were reported by Zhang et al. (2023), who identified significant increases in emotional exhaustion and depersonalization among K-12 teachers in China compared with levels recorded ten years earlier. This increase in depersonalization

indicates a weakening of teachers' emotional engagement with students and indirectly reflects a potential decline in empathic concern within educational practice. In the Indonesian context, Filtri et al. (2025) demonstrated that work-related stress mediates the relationship between psychological well-being and teachers' mental health. These findings confirm that without adequate support for well-being and emotional regulation, teachers' capacity to establish pedagogical relationships responsive to students' needs may be impaired.

The issue of empathic concern is relevant not only to practicing teachers but also to Generation Z pre-service teachers who are currently pursuing higher education. Generation Z has grown up in a digital environment characterized by extensive engagement with technology and social media, resulting in patterns of social interaction that differ from those of previous generations. Sharma et al. (2025) reported increased psychological distress among 69% of university students, including anxiety and mental health problems associated with academic pressure and social media use. Intensive social media use may heighten psychological pressure among young people, including fear of missing out, which generates anxiety when individuals perceive themselves as excluded from others' social experiences in digital environments (Salsabila, 2025). Under these circumstances, Generation Z tends to demonstrate high levels of social awareness while simultaneously remaining vulnerable to social and psychological pressures arising from increasingly complex life demands (Budiman et al., 2025).

The social awareness of Generation Z is generally reflected in caring values that have been internalized from an early age, including altruistic attitudes. Altruism refers to selfless concern and genuine consideration for the well-being of others without expecting external rewards (Bhuvana et al., 2021). Nevertheless, Szuster (2016) emphasized that empathy does not necessarily strengthen altruistic behavior directly because empathic responses may be situational and temporary. Although an altruistic orientation reflects concern for the welfare of others, this value does not always translate into stable empathic engagement, as the expression of empathy is influenced by emotional states, social contexts, and individuals' capacity to regulate their emotional responses. This condition reflects a socio-psychological tension among Generation Z pre-service teachers.

The tension between altruistic preferences and the consistency of empathy can be understood through Batson's Empathy-Altruism Theory. This theory explains that empathy toward another person's circumstances may generate altruistic motivation, namely an impulse to provide assistance without expecting personal rewards. However, the relationship between empathy and altruism is not always linear or consistent because the strength of altruistic motivation arising from an empathic response largely depends on situational factors and an individual's psychological capacity to manage that emotional response. This theoretical perspective provides a foundation for examining why altruistic preferences among Generation Z pre-service teachers do not necessarily translate into stable empathic concern.

In addition to individual factors, the academic environment contributes to the development of pre-service teachers' social-emotional competencies. Wu et al. (2023) emphasized that the social-emotional competencies of pre-service teachers are influenced by the university climate and the psychological pressures experienced during teacher education, which affect their ability to effectively manage stress and interpersonal relationships. Difficulties in managing emotions may reduce the quality of teacher-student interactions and undermine the effectiveness of interpersonal relationships, both of which are essential prerequisites for teacher professionalism. Aldrup et al. (2022) demonstrated that teachers' social-emotional competencies, including empathy, constitute prerequisites for high-quality teacher-student interactions and improved student learning outcomes. Savina et al. (2025)



similarly emphasized that teachers' emotional competencies, including emotional regulation and empathy, influence the effectiveness of interpersonal relationships and classroom management. In the context of substantial academic and social pressures, the consistency of empathy among pre-service teachers may be disrupted, potentially undermining prosocial learning processes and concern for students' well-being. This issue is particularly crucial in Economics Education because empathy is not merely a social skill but also a foundation for internalizing the values of social justice and well-being in instructional practice.

The incongruence between altruistic preferences and the consistency of empathy highlights the importance of understanding the psychological factors involved in managing emotional responses, particularly self-control. Self-control is a component of self-regulation that refers to an individual's capacity to inhibit immediate responses in pursuit of long-term benefits when confronted with situations that require behavioral restraint (Burt, 2020). Strong altruistic preferences may not necessarily result in empathic concern when individuals lack sufficient self-control to translate these values into adaptive emotional processes. Stavrova et al. (2022) stated that individuals with low self-control tend to have difficulty maintaining relational engagement and are more likely to withdraw from social interactions, thereby undermining the consistency of their empathic involvement. Consistent with this finding, Li et al. (2022) found that self-control moderated the relationship between empathic concern and altruistic tendencies. Collectively, these findings indicate that self-control plays an important role in maintaining the stability of empathic responses.

Nevertheless, previous studies, including those conducted by Stavrova et al. (2022) and Li et al. (2022), have generally focused on university students as a broad population and have not specifically examined Economics Education pre-service teachers. These students are expected not only to acquire an academic understanding of economic concepts but also to internalize the values of social justice and well-being that underpin economics instruction. Addressing this research gap, the present study aims to: (1) analyze the effect of altruistic preferences on empathic concern among Generation Z pre-service teachers; and (2) examine the role of self-control in moderating the effect of altruistic preferences on empathic concern among Generation Z pre-service teachers. This study is expected to provide an accurate understanding of how self-control strengthens or weakens the effect of altruistic preferences on empathic concern among future educators.

Research Method

This study employed a quantitative approach, as data were collected at a single point in time to objectively and systematically examine relationships among variables. The study involved three variables: altruistic preferences as the independent variable (X), empathic concern as the dependent variable (Y), and self-control as the moderating variable (Z). The population of this study comprised Generation Z pre-service teachers enrolled in the Economic Education Study Programs at Universitas Sebelas Maret (UNS) and Universitas Negeri Semarang (UNNES). The two universities were selected because UNS and UNNES have strong academic reputations in education and teacher training. Both institutions also hold the status of Legal Entity State Universities (Perguruan Tinggi Negeri Badan Hukum or PTN-BH), indicating the presence of established institutional governance standards. Moreover, their students come from diverse social and cultural backgrounds, thereby allowing for a more comprehensive analysis.

The sampling procedure employed purposive sampling combined with proportional random sampling to ensure proportional representation from each university. Respondents were required to meet the following criteria: (1) being an active undergraduate student in an

Economic Education Study Program; (2) being enrolled at either UNS or UNNES; and (3) belonging to Generation Z, defined as individuals born between 1997 and 2012. The data collection process yielded 180 completed questionnaires. Following outlier detection using Cook's Distance, three observations were identified as outliers and excluded from the analysis. Consequently, the final sample analyzed in this study consisted of 177 respondents.

The research data were collected using an online questionnaire administered through Google Forms. The questionnaire was developed based on the indicators of each variable and employed a four-point Likert scale: 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). Altruistic preferences were measured using 12 items based on the indicators of helping, sharing, and taking care of and consoling (Luengo Kanacri et al., 2021). Empathic concern was measured using 18 items reflecting the dimensions of cognitive and affective empathy (Brett et al., 2025). Self-control was measured using seven items reflecting self-monitoring, self-evaluation, and self-reinforcement (Silfiasari & Pertiwi, 2025). Data analysis was conducted using IBM SPSS Statistics 26. Hypothesis testing was conducted in two stages. In the first stage, simple linear regression analysis was employed to examine the direct effect of altruistic preferences on empathic concern using the following equation:

$$Y = \beta_0 + \beta_1 X + e$$

In the second stage, Moderated Regression Analysis (MRA) was employed to examine the moderating effect by incorporating the interaction term between altruistic preferences and self-control into the regression equation:

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + \beta_3 XZ + e$$

Self-control was considered to moderate the relationship between altruistic preferences and empathic concern when the coefficient of the interaction term was statistically significant at ($p < 0.05$).

Results and Discussion

The first hypothesis was tested using simple linear regression analysis. Based on Table 1, the regression coefficient of 0.812 indicates that a one-unit increase in altruistic preferences was associated with a 0.812-unit increase in empathic concern. The significance value was below 0.001, which was lower than the 0.05 threshold. Therefore, altruistic preferences had a positive and statistically significant effect on empathic concern among Generation Z pre-service teachers.

Table 1. The Results of Simple Linear Regression Analysis

Variable	B	Std. Error	Beta	T	Sig.
(Constanta)	31,238	4,185		7,465	0,000
Altruism Preference	0,812	0,104	0,507	7,785	0,000

The second hypothesis test was carried out using Moderated Regression Analysis (MRA). Based on Table 2, the test results show that altruism preferences have a positive and significant effect on empathy concern, with a beta value of 0.433, a t-value of 5.646, and a significance of 0.000. Direct self-control also had a significant effect on empathy with a beta value of 0.165, a t-value of 2.213, and a significance of 0.028. However, the interaction variable between altruism preference and self-control obtained a significance value of 0.762 which is greater than 0.05, so self-control was not shown to moderate the relationship between altruism preference and empathy concern.

Table 2. The Results of Moderated Regression Analysis (MRA)

Variable	B	Std. Error	Beta	T	Sig.
(Constanta)	63,557	0,496		128,148	0,000
Altruism Preference (X)	3,123	0,553	0,433	5,646	0,000

Self-Control (Z)	1,187	0,536	0,165	2,213	0,028
Interaction of X x Z	0,108	0,355	0,021	0,304	0,762

The Effect of Altruism Preferences on Empathy Care

The results of the hypothesis test showed that altruism preferences had a positive and significant effect on empathy concern in generation Z prospective teacher students at UNS and UNNES. This significant relationship can be understood through three indicators of altruism used in this study, namely helping, sharing, and taking care of and consoling, which together reflect the psychological orientation of individuals to prioritize the welfare of others. This finding is in line with the theory of Empathy-Altruism put forward by Batson (1981) which views altruism and empathy as two constructs that are rooted in the same orientation, namely concern for others, so that individuals with strong altruistic tendencies will more easily develop stable empathy concerns.

These results are also consistent with the research of Li et al. (2022) on prospective teacher students who showed that altruism preferences are significantly related to empathy care because both are in one prosocial orientation. In addition, this finding has relevance for the development of the social and emotional competencies of prospective teacher students because the teaching profession requires the ability to read students' emotional conditions accurately, especially in dealing with the diversity of student characteristics in the classroom. Aldrup et al. (2022) emphasized that social and emotional competence, including empathy, is an important part of a prospective educator's readiness to build quality interactions with students. Therefore, altruism that is embedded since the lecture period can be the initial capital for the formation of these competencies.

The high tendency to altruistically and empathize with the respondents also shows that generation Z teacher candidates at UNS and UNNES in general have adequate emotional readiness to face the demands of the teaching profession. Although Generation Z is known to be vulnerable to psychological distress due to academic demands and social media influence, the high levels of altruism and empathy in respondents indicate that these pressures have not eroded their values of social care. In the context of the Economics Education Study Program in particular, prospective economics teacher students with a preference for altruism and high empathy have the potential to be better able to convey values such as welfare, resource distribution, and social justice in real life to students, not only as memorized material, but as attitudes that are truly understood and exemplified in daily interactions in the classroom.

The Role of Self-Control as a Moderator Variable

The results of hypothesis testing showed that self-control was not proven to moderate the influence of altruism preferences on empathy concern in prospective teacher students at UNS and UNNES. In the respondents of this study, empathy concerns remained strongly formed through altruism preferences regardless of the high or low self-control of students so that self-control ran as an independent psychological capacity, not as a reinforcement or inhibitor of the relationship between altruism and empathy. The unproven hypothesis can be understood through the self-control indicators used in this study, namely self-monitoring, self-evaluating, and self-reinforcing.

The self-monitoring indicator shows that prospective teacher students are actively monitoring and supervising their own behavior in the social environment so that they are able to adjust to the applicable norms. Self-evaluating indicators reflect students' ability to assess their behavior and achievements in relationships with others and the surrounding environment. The self-reinforcing indicator shows the ability of students to motivate themselves to behave better through internal rewards or evaluations. These three indicators show that self-control in this study touches more on aspects of cognitive regulation and



behavior towards internal impulses and external stimuli, while empathy is more related to affective sensitivity in feeling and responding to the emotional state of others. This difference in the psychological realm is what makes it possible for self-control not to play a role as a moderator in the relationship between the two main variables.

These findings are not in line with the self-control theory put forward by Tangney et al. (2004) which explains that individuals with high altruism preferences do not necessarily display optimal empathy care if they are not balanced with self-control skills because effective expression of empathy requires a mentalizing process related to self-control mechanisms in the social brain (Krönke et al., 2021). However, the test results in this study are supported by Niu et al. (2023) who stated that self-control is not always able to moderate all relationships between psychological variables, but only affects certain variables that are directly related to the self-regulation mechanism. The research of Li et al. (2022) also found that the role of self-control moderation in the context of prospective teacher students is contextual and does not necessarily apply to all relationships of psychological variables.

Conclusion

This study aims to analyze the influence of altruism preferences on empathy concern and test the role of self-control as a moderator variable in generation Z teacher candidates. Students who have a tendency to help, share, and prioritize the interests of others tend to be better able to understand the emotional state of others and provide more caring responses. These findings show that the preference for altruism is one of the important factors in forming the empathetic character needed by prospective teachers in carrying out their professional duties. In addition, self-control has not been shown to moderate the influence of altruism preferences on empathy concern in prospective teacher students generation Z. Self-control ability does not strengthen or weaken the relationship between altruism preferences and empathy even though self-control directly has a significant effect on empathy concern. These results indicate that the level of empathy of prospective teachers is more influenced by altruism preferences itself, while other factors such as emotional intelligence, teaching practice experience, moral reasoning, and internalization of character education values during the educational process may play a greater role in strengthening the relationship between altruism and empathy concern.

This research has several limitations. First, this study only involved one moderator variable, namely self-control, which based on the results of the analysis was not proven to play a significant role in moderating the relationship between altruism preferences and empathy concerns, so it is still open to the possibility of other variables that are more relevant. Second, this study uses a design that only describes the relationship between variables at one point in time, so it has not been able to explain the process of developing the empathy of prospective teacher students from time to time. Third, the scope of respondents is still limited to prospective teacher students generation Z of the Economics Education Study Program at UNS and UNNES, so the results of the research cannot necessarily be generalized to prospective teacher students in universities and other education study programs with different characteristics.

Recommendation

Based on the findings and limitations of the research, here are some recommendations that can be conveyed. First, further research is suggested to develop a research model by adding other variables that have the potential to play a role as moderators and mediators in the relationship between altruism preferences and empathy concerns, such as emotional



intelligence, moral reasoning, teaching practice experience, resilience, mindfulness, social support, academic climate, and internalization of character education. Second, further research is suggested to expand the scope of respondents by involving students from various educational study programs and universities with different characteristics so that the generalization level of research results is wider. Third, the use of mixed methods or longitudinal designs can be considered so that the research not only illustrates the relationship between variables statistically, but also is able to explain the process of developing empathy concerns of prospective teachers during their education. Fourth, study programs and teacher education institutions are recommended to facilitate the development of emotion regulation, stress management, and self-control skills through counseling services, self-development training, and character development activities as a provision for students in facing the dynamics of the teacher profession in the future.

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