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Impulsivity, Directive Attitude, and Social Competencies Among Students of Teacher Education: Comparison Across Gender and Teacher-Training Majors

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Abstract

Introduction: Psychological characteristics related to interpersonal functioning may be relevant in teacher education; however, relatively little is known about their configuration in students preparing for educational careers. **Research Aim:** The study aimed to assess levels of impulsivity, directiveness, and multiple dimensions of social competence among teacher education students and to examine differences by gender and field of study, as well as to describe the normative competence profile of this population. **Method:** The sample consisted of 250 students aged 18–45 enrolled in teacher education programs at the University of Wrocław. Participants completed standardized self-report measures of impulsivity, directiveness, and social competence. Group differences were examined using comparative tests, and norm-referenced scores were analyzed descriptively. **Results:** Small but statistically significant gender differences were found: men scored higher on impulsivity, whereas women scored higher on cooperative competencies. No gender differences were observed for directiveness or other competence domains. Field of study was not associated with statistically significant differences in any measured variable. Norm-referenced analyses indicated a consistent profile characterized by elevated cooperative competencies and average levels in the remaining domains. **Conclusion:** Teacher education students demonstrated substantial similarity across fields of study and a shared competence configuration emphasizing cooperation. The observed pattern should be treated as preliminary and requires replication in larger and more balanced samples.

Keywords: **impulsivity, directiveness, social competencies**

Impulsywność, autorytarne podejście i kompetencje społeczne wśród studentów kierunków pedagogicznych: Porównanie pod kątem płci i specjalizacji

Streszczenie

Wprowadzenie: Cechy psychologiczne związane z funkcjonowaniem interpersonalnym mogą mieć znaczenie w kształceniu nauczycieli, jednak niewiele wiadomo o ich konfiguracji u studentów przygotowujących się do pracy edukacyjnej. **Cel badań:** Celem badania była ocena poziomu impulsywności, dyrektywności oraz różnych wymiarów kompetencji społecznych u studentów kierunków nauczycielskich, a także ustalenie ewentualnych różnic ze względu na płeć i kierunek studiów oraz charakterystyka tej populacji w odniesieniu do norm populacyjnych. **Metoda:** Badaniem objęto 250 studentów w wieku 18-45 lat studiujących na kierunkach nauczycielskich Uniwersytetu Wrocławskiego. Zastosowano standaryzowane kwestionariusze samoopisowe mierzące impulsywność, dyrektywność i kompetencje społeczne. Różnice między grupami analizowano testami porównawczymi, a wyniki odniesione do norm opisano w sposób deskryptywny. **Wyniki:** Stwierdzono niewielkie, lecz istotne statystycznie różnice płci: mężczyźni uzyskali wyższe wyniki impulsywności, natomiast kobiety wyższe wyniki kompetencji kooperacyjnych. Nie odnotowano różnic płci w dyrektywności ani pozostałych wymiarach kompetencji. Kierunek studiów nie różnicował żadnej z badanych zmiennych. Analizy z użyciem norm wykazały spójny profil, charakteryzujący się podwyższonym poziomem kompetencji kooperacyjnych przy przeciętnych wynikach w pozostałych obszarach. **Wnioski:** Studenci kierunków nauczycielskich wykazują znaczne podobieństwo między kierunkami oraz wspólną konfigurację kompetencji zorientowaną na współpracę. Zaobserwowany wzorzec ma charakter wstępny i wymaga weryfikacji w większych i bardziej zrównoważonych próbach.

Słowa kluczowe: **impulsywność, dyrektywność, kompetencje społeczne**

1. INTRODUCTION

Impulsivity, directive attitude, and social competencies are fundamental aspects of personality and behavior, particularly important in the professional context of teaching. This profession requires not only a high level of subject-matter knowledge but also the ability to effectively manage interpersonal relationships, respond appropriately in situations requiring quick decision-making, and build authority within a group. Contemporary research emphasizes that these traits are interconnected and mutually influence each other, affecting teachers' work effectiveness and relationships with students (Đigić, 2018; Halder & Dutta, 2015; Kim et al., 2017).

In this article, we analyze impulsivity, directiveness, and social competencies among students in teacher education programs. By presenting new research findings on these variables, we aim to clarify their relevance in preparing future teachers. We will discuss both the potential benefits of these traits and the risks they may pose for students' professional development and practice.

This paper also reflects on ways to strengthen social competencies, manage impulsivity, and appropriately develop directive attitudes in the teacher education process. The presented research results and their interpretation may be useful not only for researchers but also for practitioners involved in the education and training of future teachers.

2. IMPULSIVITY

Impulsivity is widely recognized in psychology as a significant concept encompassing both personality traits and symptoms of pathological behavior. However, it is a multifaceted construct that is difficult to define conclusively. In the scientific literature, impulsivity is discussed both as a disposition observed in typically functioning individuals and as an element of various mental disorders (Jakubczyk & Wojnar, 2009). According to Eysenck and Eysenck (2011), impulsivity is characteristic of individuals who prefer challenges and new experiences, as well as those inclined to take or even seek out risks. They describe impulsivity as a problematic dimension of risky behaviors, where there is a lack of consideration for their consequences. This distinguishes impulsivity from a propensity for risk, which assumes an awareness of the potential outcomes of one's actions (Jaworowska, 2011).

In the study by Wolfe and Kasmer (1988), which examined the relationships between extraversion, sociability, and impulsivity with preferences for cooperative or competitive behaviors among a group of 117 students (88 women and 33 men), the results indicated no correlation between the level of impulsivity and gender. It also demonstrated a significant correlation between impulsivity and certain aspects of competitive behaviors.

More recently, Vasile (2012) conducted a study on the dynamics of impulsivity and its relationships with other personality variables in a group of 75 Romanian teachers aged 21 to 57. Among the female participants (57 individuals in the study), 42% achieved average to high scores in the trait of impulsivity, whereas among the male participants (18 individuals in the study), 50% achieved scores ranging from average to high. The overall sample yielded average scores for impulsivity, with the mean score for men being higher (9.11) than for women (8.26). The researcher suggests that average to high scores in functional impulsivity may translate into greater lesson attractiveness and a tendency to verify and refresh one's knowledge, as well as how it is conveyed to students. On the other hand, the same results—in the realm of non-functional impulsivity—may correlate with low teaching effectiveness.

3. DIRECTIVE ATTITUDE

Directive behavior is an inherent characteristic of effective leadership, understood as guiding people from a position of dominance (Brzozowski, 1997, p. 70). John J. Ray's concept (1971, 1976) stems from his critique of the authoritarian personality as described by Adorno and others (cited in: Paliga, et al., 2020). In his framework, Ray (1976) identified directive behavior as one of the traits associated with the authoritarian personality, defined as dominating and imposing behavior. Individuals with a high directive index may have a tendency to impose their opinions on others. However, directive behavior is not limited to authoritarian actions; it is also related to motivation for success, conservatism, and a propensity for discrimination. Ray's concept has been supported by numerous studies conducted by the author himself and other researchers (Ray, 1984, 1985, 1986, 1989; Ray & Lovejoy, 1988). Directive behavior is also associated with a high motivation for achievement (Paliga et al., 2020), aggression, assertiveness, and power (Jasiński & Wilczyńska, 2015; Paliga et al., 2020; Turska-Kawa & Wojtasik, 2017), which is particularly significant in the context of work, not only with children, for future teachers. Ray (1981) noted that directiveness has a positive correlation with aggression and dominance, and a negative correlation with submissiveness.

Building on Ray's (1976) conceptualization, numerous researchers have examined directiveness in different populations to better understand its role in leadership, motivation, and interpersonal dynamics. The following studies illustrate how directiveness manifests across various educational and professional settings, providing insight into its practical implications —particularly in the context of teaching.

Jasiński and Wilczyńska (2015) used the Directiveness Scale (DS) to measure levels of directiveness among 41 students (17 women and 24 men) at the Faculty of Physical Education, Teacher Training College of the Academy of Physical Education in Gdańsk. They found that 26.83% of participants exhibited a high level of directiveness, which they regarded as potentially problematic for future physical education teachers.

In a separate study, Czerniawska and Dolata (2005) administered the DS to two groups of students: 165 (18 men, 147 women) from the Faculty of Education and Psychology at the University of Białystok, and 160 (55 men, 105 women) from the Faculty of Management at the Białystok University of Technology. Across both samples, the overall mean score for directiveness was 56.57.

Popiołek and Gojny (2010) investigated directiveness and social competencies using Ray's Directiveness Scale and the KKS-A(D) Social Competence Questionnaire. Their sample comprised 144 employees from trade, service, and public sectors (including teachers): 57 individuals (35 women, 22 men) under 35 years of age, and 47 individuals (33 women, 22 men) over 50. Results showed that younger participants (< 35) displayed significantly higher directiveness—including tendencies toward aggression and dominance—along with more pronounced social exposure skills and assertiveness compared to those over 50.

Kocur (2017) sought to determine whether teachers differ from other professional groups in terms of their sense of power, need for power, and directiveness, again using the Directiveness Scale (DS). The research group included 198 teachers, comprising 158 women and 40 men. The average age of the respondents was 41.64 (SD = 9.26). The teaching experience of the participants ranged from 1 to 43 years, with an average of 16.96 years (SD = 10.00). The control group consisted of 156 individuals, including 114 women and 42 men. The average age of the control group was 40.24 (SD = 11.08). Individuals in the control group held various professions, including librarian, economist, electronics engineer, electrician, physiotherapist, miner, salesperson, IT specialist, and psychologist. Compared to the control group, teachers scored significantly higher in the area of directiveness (M = 31.21 compared to M = 29.46 in the control group), as well as higher scores in areas of sense of power in the family, sense of power among peers, sense of power over supervisors, and need for power. The study also observed a negative correlation between age and the level of directiveness and need for power among teachers, while the control group exhibited a negative correlation between age and these variables. This indicates that directiveness and sense of power do not decrease with age among teachers. According to Kocur (2017), the teaching profession inherently involves exercising power over students, which may foster traits linked to stereotypical masculinity and dominance.

Finally, a Norwegian study by Engevik and colleagues (2015) examined the role of teacher directiveness in educational dialogues across different teacher–child dyads and child engagement levels. A total of 14 teacher-child dyads participated in the study. Seven involved a special education teacher collaborating with a child with Down syndrome, while the other seven involved a preschool teacher with a typically developing preschool-aged child. The participants were recorded while solving tasks. Qualitative analysis of the dialogue segments between teachers and children indicated a higher level of directiveness from special education teachers. At the same time, children with Down syndrome exhibited a lower level of engagement in the task compared to typically developing children. According to the authors, this may suggest the usefulness of a directive approach while simultaneously providing emotional support from teachers during problem-solving for children who, due to their cognitive limitations, would not be able to meet the challenges independently.

4. SOCIAL COMPETENCIES

Michael Argyle (2002, p. 133) defines social competence as possessing the necessary skills to exert the expected influence on other people in social situations. According to Matczak's definition, social competencies are "complex skills that determine the effectiveness of coping in specific types of social situations, acquired by individuals through social training" (Matczak, 2007, p. 7). Thus, social competencies are understood as an individual's ability to effectively handle social situations, both in private life and in broader social environments—educational or professional (Matczak & Martowska, 2013).

The same authors propose a division of competencies into five types. Assertive competencies refer to the skills of influencing others, such as the ability to delegate tasks and enforce them, as well as managing the work of others without excessively seeking approval from others. Individuals with high scores in social competencies are independent and emotionally balanced; they can be referred to as "assertive managers or leaders." Cooperative competencies refer to interpersonal skills that facilitate collaboration with others, providing support and assistance, motivating people, and resolving conflicts. A person with high competencies in this area can be called a "helpful collaborator." Social competencies relate to informal situations where a person is at the center of others' attention. They correlate with emotional intelligence, a tendency toward psychological exhibitionism, and a high need for stimulation. A person with high competencies in this area can be called the "life of the party." These competencies are useful not only in private interactions but also in professional contexts. Social resourcefulness pertains to the ability to handle various everyday matters, such as neighborhood relations or bureaucratic issues. It includes skills such as effectively expressing one's needs and asking for help. A person with high competencies in this area is referred to as a "resourceful executor." Social initiative competencies relate to the ability

to initiate and carry out social goals, as well as to engage others in such activities. A person with high competencies in this area is called a "pro-social initiator".

In Poland, numerous studies have investigated teachers' social competence levels, and most indicate average results. For example, Twardowska-Staszek and Alberska (2020) examined 100 teachers (90% women, 10% men) from special schools and centers for children with intellectual disabilities. Their findings showed an overall average score of 6.19 sten (indicating an average level) on the PROKOS questionnaire, with men scoring higher than women on each scale. The lowest scores appeared on the social competencies (5.97 sten) and assertiveness (5.77 sten) scales, while the highest score was recorded for social initiative competencies (6.51 sten).

In a study by Piorunek and Werner (2017), 123 teacher educators (94 women, 25 men) and 118 students in teacher training programs (90 women, 28 men) were surveyed. The findings showed that 61.9% of the teachers scored at an average level of social competencies (between the 4th and 7th stanine). Moreover, teachers demonstrated lower social competencies compared to other professions requiring direct interpersonal engagement, such as coaching, management, firefighting, and medicine. This study also revealed significant gender differences, diverging from earlier research: male teachers were more likely to score low in social competencies (an overall score of 167.44, stanine 4) compared to their female counterparts (181.96, stanine 6). Furthermore, no significant differences emerged in overall social competency scores between teachers and students in teacher training programs. However, students significantly outperformed teachers in assertiveness and cooperation competencies. Finally, the authors emphasized that only 18.5% of teachers displayed high levels of cooperative competencies—those most strongly associated with providing support and assistance.

5. PRESENT STUDY

Despite accumulating research indicating that impulsivity, directive attitude, and social competencies are relevant to functioning in educational contexts, relatively few studies have examined these constructs jointly, particularly among students preparing for educational careers. Previous findings suggest possible gender- and field-related differences (e.g., Vasile, 2012; Kocur, 2017), although the available evidence remains mixed and methodologically heterogeneous.

Therefore, the present study aimed to assess the levels of impulsivity, directive attitude, and multiple dimensions of social competencies among students enrolled in teacher education programs at the University of Wrocław and to examine whether these characteristics differ by field of study and gender. In addition to between-group comparisons, the study also sought to characterize the population with respect to normative reference values provided by standardized instruments, allowing identification of competence configurations typical for this educational pathway independently of differences between majors. Accordingly, norm-referenced indices were treated as complementary descriptive information rather than inferential evidence. The study had a descriptive–comparative character and was not designed to test predictive or causal models; therefore, the hypotheses formulated below should be understood as a priori expectations organizing group comparisons rather than confirmatory tests of a theoretical model.

Based on prior literature, the following expectations were formulated to guide group comparisons:

H1: Levels of impulsivity, directiveness, and social competencies differ by gender.
H2: Levels of impulsivity, directiveness, and social competencies differ between fields of study.

6. METHOD

6.1 Participants and Procedure

All procedures were approved by the ethics committee at the Institute of Psychology, University of Wrocław. Participants were recruited during a psychology course and received information about the purpose and scope of the study. Participation was voluntary and anonymous. After providing informed consent, respondents completed a demographic questionnaire and a set of standardized measures. The initial sample consisted of 254 students. Four cases were excluded due to incomplete data. The final analytic sample included 250 participants (69.2% women), aged 18–45 years (M = 21.60, SD = 3.48). The sample included students representing multiple teacher-training majors. The most numerous groups were Polish Philology (n = 46, 18.4%), History (n = 44, 17.6%), Chemistry (n = 35, 14.0%), Mathematics (n = 32, 12.8%), and English Philology (n = 28, 11.2%). Other majors were represented by smaller numbers of participants: Roman Philology (n = 22, 8.8%), Musical Education (n = 13, 5.2%), Biology (n = 12, 4.8%), German Philology (n = 10, 4.0%), Classical Philology (n = 3, 1.2%), Russian Philology (n = 2, 0.8%), Slavic Philology (n = 2, 0.8%), and Ukrainian Philology (n = 1, 0.4%). Because several majors were represented by very small numbers, they were grouped into broader conceptually meaningful categories to ensure adequate subgroup sizes for comparisons. The final categories were: Biology (n = 12, 4.8%), Chemistry (n = 35, 14.0%), History (n = 44, 17.6%), Mathematics (n = 32, 12.8%), Music (n = 13, 5.2%),

Polish Philology (*n* = 46, 18.4%), and Foreign Philology (*n* = 68, 27.2%), the latter including English, German, Roman, Classical, Russian, Slavic, and Ukrainian philologies.

6.2 Measures

6.2.1 Social competences

Social competences were assessed using the PROKOS Scale (Matczak & Martowska, 2013), a self-report tool consisting of 90 items - 60 diagnostic items and 30 filler ones. The questionnaire is designed to measure social competences across five specific domains: assertive competencies (skills in influencing others and resisting their influence), cooperative competencies (interpersonal skills and social dexterity), sociable competencies (skills in initiating and maintaining informal relationships), prosocial competencies (skills in organizing social activities and involving others), and social resourcefulness (skills in completing assigned tasks). Respondents rate their answers on a four-point scale, assessing how well they would perform in described situations, where 4 indicates *definitely good*, 3 – *rather good*, 2 – *rather poor*, and 1 – *definitely poor*. Example items include: "Encourage your employee to attend a training session", "Calm down a disruptive customer in your company", and "Introduce unfamiliar individuals to one another at an event you organize". The scale demonstrated satisfactory psychometric properties, with Cronbach's alpha reliabilities ranging from .87 for sociable competencies to .75 for prosocial competencies.

6.2.2 Impulsivity

Impulsivity was measured using the impulsivity subscale of the IVE questionnaire (Jaworowska, 2011). This subscale consists of 19 items and is part of a broader questionnaire assessing three personality traits: impulsivity, risk-taking, and empathy. The full scale contains 54 questions, with responses provided in a *Yes/No* format. Example items include: "Do you often get into trouble because you act without thinking?" and "Do you usually say things without thinking?". The impulsivity subscale demonstrates satisfactory internal consistency, with test-retest reliability coefficients of $r = 0.70$. The Cronbach's alpha reliability for the subscale in our study was .82.

6.2.3 Directiveness

Directiveness was assessed using the Directiveness Scale (Ray, 1976; Polish adaptation: Brzozowski, 1997), which measures directiveness as aggressive dominance and a tendency to impose one's will on others. A shortened version of the scale (D-15) was used in this study, consisting of 15 items. Respondents answered each item by selecting one of three options: *Yes*, [question mark], or *No*. Example items include: "Are you inclined to boss people around?" and "Does being asked to take responsibility for a situation make you feel uncomfortable?". Higher scores indicate a higher level of directiveness. The scale has demonstrated satisfactory reliability, with a Cronbach's alpha of 0.78.

6.3 Statistical analyses

Due to non-normal distributions and unequal group sizes, nonparametric tests were used. Differences between fields of study were examined using the Kruskal–Wallis test with Dwass–Steel–Critchlow–Fligner post-hoc comparisons. Effect sizes (ϵ^2) were calculated. Results with $p < .05$ were treated as statistically significant. Values between .05 and .10 were interpreted only as exploratory trends. Norm-referenced sten scores were analyzed descriptively and were not treated as inferential statistical evidence.

7. RESULTS

Gender differences were examined using independent-samples t-tests with Welch correction when the assumption of homogeneity of variances was violated. Men scored significantly higher on impulsivity, whereas women scored higher on cooperation. The magnitude of both effects was small. No significant gender differences were observed for directiveness, assertiveness, social resourcefulness, social skills, social coping, or total social competencies (see Table 1).

Table 1 ***Gender differences in impulsivity, directiveness, and social competencies (Welch's t-tests)***

Variable	Women M (SD)	Men M (SD)	*t (df)*	*p*	Cohen's d
Impulsivity	6.26 (4.28)	7.45 (4.31)	*−2.03 (145)*	*.044*	−0.28
Directiveness	29.51 (7.01)	30.92 (7.68)	*−1.38 (134)*	*.169*	−0.19
Assertive competencies	36.27 (6.34)	37.95 (7.08)	*−1.79 (132)*	*.076*	−0.25
Cooperative competencies	51.47 (5.83)	49.56 (7.26)	*2.04 (121)*	*.044*	0.29
Social resourcefulness	27.99 (6.01)	27.45 (6.46)	*0.62 (137)*	*.534*	0.09
Sociable competencies	15.51 (3.36)	15.10 (3.73)	*0.82 (133)*	*.412*	0.11
Prosocial competencies	38.93 (5.33)	38.95 (6.80)	*−0.03 (119)*	*.979*	−0.00
Total social competence score	170.17 (22.03)	169.01 (27.43)	*0.33 (121)*	*.744*	0.05

Note. Welch's t-tests were used due to violations of the homogeneity of variance assumption. Positive Cohen's d values indicate higher scores among women.

To examine whether students representing different fields of teacher education differ in impulsivity, directiveness, and social competencies, two complementary sets of analyses were conducted. First, inferential analyses were performed using nonparametric procedures (Kruskal–Wallis tests with Dwass–Steel–Critchlow–Fligner [DSCF] post-hoc comparisons) due to non-normal distributions and unequal subgroup sizes. Second, norm-referenced sten scores were summarized descriptively and treated as supplementary and exploratory.

In the inferential analyses, study major was not associated with statistically significant differences in impulsivity, $\chi^2(6) = 5.54$, $p = .477$, $\varepsilon^2 = .0223$, or directiveness, $\chi^2(6) = 4.66$, $p = .588$, $\varepsilon^2 = .018$. Likewise, no statistically significant differences were found for overall social competencies (total score), $\chi^2(6) = 4.61$, $p = .595$, $\varepsilon^2 = .018$. For each of these outcomes, DSCF post-hoc comparisons were non-significant (all $p > .05$), supporting the conclusion that between-major differentiation was minimal in the present sample.

Analyses conducted separately for the social competence subscales yielded a comparable pattern. No statistically significant between-major differences were observed for assertive competencies, $\chi^2(6) = 7.76$, $p = .256$, $\varepsilon^2 = .031$; sociable competencies, $\chi^2(6) = 4.31$, $p = .634$, $\varepsilon^2 = .017$; prosocial competencies, $\chi^2(6) = 2.28$, $p = .892$, $\varepsilon^2 = .009$; or social resourcefulness, $\chi^2(6) = 2.94$, $p = .817$, $\varepsilon^2 = .0118$. All corresponding effect sizes were small, indicating limited between-group variability.

For cooperative competencies, the omnibus test approached but did not reach the conventional threshold of statistical significance, $\chi^2(6) = 11.39$, $p = .077$, with a small effect size ($\varepsilon^2 = .046$). Importantly, DSCF post-hoc comparisons did not yield statistically significant contrasts between any pairs of majors (all $p > .05$). Accordingly, this result is reported only as an exploratory trend requiring verification in larger and more balanced samples.

In the descriptive analyses, norm-referenced sten scores were used to classify results into low (1–3), average (4–7), and high (8–10) categories. Because sten norms differ by gender, these summaries were presented separately by study major and gender (see Table 2). Sten-based categorizations are norm-based and descriptive; therefore, they do not constitute inferential evidence of group differences and are provided only as supplementary context.

Table 2 ***Means and sten values by study major and gender***

Study major and gender		*N*	I	D	AC	CC	SC	PC	SR	CT
Biology	F	10	6.0 (4)	29.4 (6)	36.2 (5)	49.0 (9)	26.7 (4)	15.1 (6)	40.0 (6)	167 (5)
	M	2	4.5 (3)	35.0 (7)	35.0 (3)	39.5 (5)	21.5 (2)	12.0 (3)	30.5 (2)	139 (2)
Chemistry	F	23	6.6 (5)	28.0 (6)	33.3 (4)	49.2 (9)	25.8 (4)	14.9 (5)	37.0 (4)	160 (4)
	M	12	7.9 (5)	30.7 (5)	39.0 (5)	52.5 (9)	29.3 (5)	15.7 (6)	41.5 (6)	178 (5)
History	F	12	6.4 (4)	28.8 (6)	37.2 (5)	51.3 (10)	28.4 (5)	17.0 (6)	40.7 (6)	175 (5)
	M	32	7.9 (5)	32.2 (6)	38.6 (5)	49.6 (8)	27.1 (4)	15.5 (5)	39.0 (5)	170 (5)
Mathematics	F	21	6.0 (4)	28.3 (6)	34.6 (4)	50.1 (10)	28.2 (5)	15.3 (5)	37.2 (5)	165 (4)
	M	11	7.5 (5)	29.7 (5)	37.1 (4)	47.0 (7)	26.2 (4)	14.0 (4)	37.7 (5)	162 (4)
Music	F	12	4.5 (3)	29.5 (6)	37.2 (5)	53.5 (10)	29.8 (5)	15.9 (6)	39.4 (6)	176 (5)
	M	1	9.0 (6)	31.0 (5)	35.0 (3)	53.0 (9)	29.0 (4)	15.0 (5)	37.0 (4)	169 (5)
Polish Philology	F	41	6.8 (5)	31.0 (6)	36.7 (5)	52.1 (10)	28.5 (5)	15.3 (5)	39.6 (6)	172 (5)
	M	5	6.6 (5)	32.2 (6)	35.8 (4)	50.8 (9)	31.2 (5)	14.6 (5)	39.4 (5)	172 (5)
Foreign Philology	F	54	5.9 (4)	29.7 (6)	37.1 (5)	52.3 (10)	28.0 (4)	15.6 (6)	39.0 (5)	172 (5)
	M	14	6.5 (5)	28.1 (3)	37.6 (4)	49.6 (8)	27.1 (4)	15.2 (5)	38.9 (5)	168 (4)

Note. I = impulsivity; D = directiveness; AC = assertive competencies; CC = cooperative competencies; SC = sociable competencies; PC = prosocial competencies; SR = social resourcefulness; CT = total social competence score. Numbers in brackets represent sten values.

Sten-based analysis indicates a consistent pattern across the examined sample. Cooperative competencies were frequently classified in the high range (typically sten 8–10), whereas the remaining competence domains were generally located within the average range. This tendency was visible across majors and genders, although variability was greater in smaller subgroups.

Because sten scores are norm-referenced and not derived from between-group statistical tests, the pattern should be treated as a distributional description rather than evidence of stable differences between fields of study or gender groups. Accordingly, the sten results are presented as a descriptive complement to the inferential analyses.

Beyond the absence of between-major differences, the profiles suggest a population-level configuration: cooperative competencies were elevated relative to norms, whereas assertiveness, sociability, prosocial competencies, social resourcefulness, and impulsivity remained within the average range. This configuration indicates an interpersonal orientation characterized by cooperation without increased dominance or expressiveness.

8. DISCUSSION

The present study examined impulsivity, directiveness, and multiple dimensions of social competencies among students who enrolled in teacher education programs. Its primary objective was to determine whether these characteristics vary across different fields of study and gender. In line with the descriptive–comparative character of the study, an estimation-oriented manner has been taken to interpret statistical tests, with the emphasis on effect sizes and overall patterns rather than binary significance decisions.

Statistically significant gender differences have been limited to two variables: men scored higher on impulsivity, whereas women had higher scores on cooperative competencies and both effects were small in magnitude. No gender differences were observed in the remaining domains, indicating that gender-related variation was restricted to behavioral regulation and collaborative functioning rather than general social competence.

Nonparametric analyses did not reveal statistically significant differences between fields of study in impulsivity, directiveness, or overall social competencies. Effect sizes were small across models, indicating limited between-group variability. Accordingly, the results do not support the conclusion that a field of study is a meaningful differentiating factor for these psychological characteristics within the examined sample. A near-threshold result was observed for cooperative competencies. However, it did not reach statistical significance and post-hoc tests were nonsignificant. This pattern should therefore be interpreted strictly as exploratory and not as evidence of field-related differences.

Descriptive norm-referenced sten scores indicated a characteristic competence configuration in the examined teacher-training population. Cooperative competencies were consistently located in the high range relative to population norms, across majors and genders, whereas the remaining competence domains were typically situated within the average range. Rather than globally elevated social competence, this sample exhibits a selective emphasis on cooperation-related functioning. As sten scores indicate relative standing against population norms, they describe the sample's overall profile rather than differences between particular groups. The small gender differences observed in inferential analyses were consistent with this configuration but did not alter the overall profile. Accordingly, this pattern may tentatively suggest a potential self-selection bias toward teacher education among cooperative individuals; however, this hypothesis requires further verification using independent and more balanced samples.

Possible explanations discussed in the previous research include both sociocultural and biological mechanisms influencing the development of assertive and cooperative behaviors, such as socialization patterns, gender norms, and communication styles. The present study neither confirms nor rules out these mechanisms and therefore should not be interpreted as providing causal evidence.

The practical implications of the study should be framed conservatively. Rather than indicating deficits in particular subgroups, the findings may serve as preliminary guidance for a future research on social competence development in teacher education. Replication with larger, more balanced samples is necessary before formulating targeted intervention recommendations.

8.1 Limitations

Several limitations of the present study should be acknowledged. First, the sample was drawn from a single university, which limits the generalizability of the findings to other teacher education contexts and educational systems. The results should therefore be interpreted as characterizing this specific population rather than pre-service teachers in general. Second, subgroup sizes defined by field of study and gender were markedly unequal and, in some cases, very small. This imbalance substantially reduces statistical power for between-group comparisons and increases the risk of unstable estimates. Consequently, the absence of statistically significant differences between majors should not be interpreted as definitive evidence of equivalence across fields. Third, the sample was strongly feminized, reflecting the structure of teacher education programs but further constraining the interpretation of gender comparisons. The smaller number of male participants limits the precision of estimated gender effects and requires cautious interpretation of observed differences. Fourth, all variables

were assessed using self-report questionnaires. Such measures are susceptible to response biases, including social desirability and subjective interpretation of items, particularly in domains related to social functioning. The results therefore reflect perceived rather than objectively observed competencies. Fifth, the study did not control for potentially relevant covariates, such as year of study, teaching practice experience or prior pedagogical training. These factors may contribute to variability in social competencies. Finally, the cross-sectional design precludes causal inference and does not allow conclusions about developmental processes or directionality of relationships between the examined characteristics.

Taken together, the findings should be interpreted cautiously and primarily as a descriptive characterization of the examined sample. Future studies should include multi-site recruitment, more balanced subgroup sizes and multi-method assessment strategies in order to strengthen the robustness and generalizability of conclusions. In summary, the results indicate substantial similarity across teacher education fields in impulsivity, directiveness, and social competencies in general, but the observed trends should be regarded as descriptive and exploratory rather than confirmatory.

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