BALTIC JOURNAL OF SPORT & HEALTH SCIENCES
No. *4*(137); 2025; 4–21; ISSN 2351-6496 / eISSN 2538-8347
DOI: *https://doi.org/10.33607/bjshs.v4i137.1695*

The Relationship Between Emotional Intelligence and Self-Compassion Among Medical Students

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ABSTRACT

Introduction: In the scientific literature, medical students' emotional intelligence is associated with better professional achievements, higher quality of patient care, and lower levels of burnout. Self-compassion may help reduce experienced stress and enhance psychological well-being. Although emotional intelligence and self-compassion are important competencies for future physicians, research examining the interplay between these constructs is still lacking. Therefore, this study aims to fill this research gap.

Methods: The study involved 234 medical students (years I–VI) from the Lithuanian University of Health Sciences. The participants' mean age was 22.14 ± 3.51 years. The questionnaire consisted of the Emotional Intelligence Scale, the Self-Compassion Scale, and sociodemographic questions.

Results: The findings revealed that medical students demonstrated a relatively high level of emotional intelligence. No statistically significant differences in emotional intelligence were found based on sociodemographic variables. Medical students showed a moderate level of self-compassion. They were significantly more likely ($p < 0.001$) to apply positive self-compassion strategies than negative ones. A statistically significant association was found between self-compassion and age ($p < 0.001$). A weak but statistically significant positive correlation was identified between emotional intelligence and self-compassion (rho = 0.41, $p < 0.001$).

Conclusions: Emotional intelligence among medical students was not associated with sex, age, or study year. Self-compassion was related to some sociodemographic characteristics, excluding sex. A statistically significant association between emotional intelligence and self-compassion was observed in the sample of medical students.

Keywords: emotional intelligence, self-compassion, medical students

1. INTRODUCTION

Emotional intelligence (EI) is *a type of intelligence that involves the ability to process emotional information and use it in reasoning and other cognitive activities* (American Psychological Association, 2018). By applying these abilities, individuals can make better decisions, resolve conflicts more effectively, and build stronger interpersonal relationships (Alharbi & Alnoor, 2022; Lopes et al., 2003; Winardi et al., 2020). Although there is ongoing debate about whether EI is an innate trait or a learned ability, some authors argue that EI can be developed and strengthened throughout life (Bitar et al., 2023; Jiménez-Picón et al., 2021). This is particularly relevant for medical students, who, upon entering their studies, frequently face challenges that require not only theoretical knowledge but also the emotional capacity to cope with stressful situations (Drigas & Papoutsi, 2020). Therefore, developing EI skills during medical training is highly beneficial. In addition, medical students – as future healthcare professionals – often encounter emotionally demanding situations, such as providing care for patients and working in teams (Jiménez-Picón et al., 2021; Ramos-Vidal & Ruíz, 2023). Addressing these challenges requires emotional stability, which can be supported by

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well-developed emotional intelligence. Thus, the ability to regulate emotions is a fundamental skill that every healthcare professional should cultivate (Bitar et al., 2023).

For medical students to provide high-quality care for others, it is essential that they can take care of their own emotional well-being. Given that the work of healthcare professionals presents significant emotional challenges, the risk of burnout increases (Ramos-Vidal & Ruíz, 2023). Additionally, it may lead to a decline in empathy levels and a deterioration in the quality of care provided (Ramos-Vidal & Ruíz, 2023). For these reasons, self-care is not optional but necessary, as it ensures emotional balance and professional effectiveness (Posluns & Gall, 2019).

One of the key factors contributing to emotional well-being is self-compassion. It refers to the ability to treat oneself with understanding and kindness, particularly in the face of difficulties or personal mistakes (Neff, 2022). Self-compassion also involves adopting a non-critical attitude towards one's flaws and failures. Medical students frequently encounter high academic demands (Steiner-Hofbauer & Holzinger, 2020), a stressful work environment (Tanaka et al., 2010), and inevitable setbacks and errors during their learning process (Fischer et al., 2006). However, self-compassion in the face of these challenges can help maintain psychological well-being (Di Fabio & Saklofske, 2021). It also reduces stress and anxiety levels as well as symptoms of depression (de Souza et al., 2020; Dundas et al., 2016). Furthermore, self-compassion enhances self-confidence (Muris & Otgaar, 2023), improves learning effectiveness, and boosts motivation (Shahid & Farhan, 2022).

Although emotional intelligence (EI) plays a vital role for professionals working in healthcare, research indicates that EI may decline during medical studies (Imperato & Strano-Paul, 2021). This decline is believed to be influenced by clinical training in healthcare institutions, which often involves high levels of stress and pressure. Furthermore, as medical students approach the end of their studies, symptoms of exhaustion and burnout tend to become more prominent (Imperato & Strano-Paul, 2021). During this period, compassionate behaviour and self-compassion are often reduced (Imperato & Strano-Paul, 2021). While the relationship between EI and self-compassion has gained growing attention in the scientific literature, insufficient focus has been placed specifically on medical students. Despite the recognised benefits of both constructs for this population, research has predominantly examined these associations in samples of nursing students or practicing nurses. As a result, there is a lack of studies exploring the connection between EI and self-compassion specifically among medical students.

Emotional intelligence

One of the most frequently cited theories of EI in the scientific literature is the ability-based model proposed by Mayer and Salovey in 1990 (Singh et al., 2022). This model identifies four groups of skills – perceiving emotions, facilitating thought using emotions, understanding emotions, and managing emotions – which develop gradually from simpler to more complex abilities (Mayer et al., 2016). **Perception of emotions** refers to the ability to recognise and differentiate one's own emotions from those of others (Mayer & Salovey, 1990). **Facilitating thought using emotions** involves employing emotions to enhance cognitive processes such as reasoning, problem-solving, and interpersonal communication (Kanesan & Fauzan, 2019). **Understanding emotions** encompasses the ability to classify emotions and comprehend their meanings (Kanesan & Fauzan, 2019). **Managing emotions** is defined as the ability to regulate one's own and others' emotions to achieve a desired outcome (Kanesan & Fauzan, 2019; Mayer et al., 2016).

Building on this theoretical model, psychologist Nicola Schutte developed the Schutte Self-Report Emotional Intelligence Test (SSEIT) in 1998 (O'Connor et al., 2019). This self-report EI measure is considered superior to others due to its high reliability and validity, which ensures more accurate results (Jonker & Vosloo, 2008). Additionally, it is easy to administer and interpret and has been tested across various cultures (Jonker & Vosloo, 2008). Importantly, the SSEIT is widely used in scientific research to assess emotional intelligence (Jonker & Vosloo, 2008; O'Connor et al., 2019). The ability-based model and the SSEIT provide a robust theoretical and practical framework for examining emotional intelligence among medical students, offering a clear rationale for the current study.

EI is increasingly recognised as a critical competence in the medical field, where interpersonal interactions are essential (Jiménez-Picón et al., 2021). EI contributes to stress management, resilience, empathy, and overall professional effectiveness (Bitar et al., 2023; Jiménez-Picón et al., 2021). Medical students experience high levels of stress and psychological burden (Drigas & Papoutsi,

2020), and higher EI has been associated with lower stress, better coping with challenging situations, and reduced risk of burnout (Carvalho et al., 2018; Shariatpanahi et al., 2022). EI also supports academic performance, engagement, and interpersonal relationships, which in turn enhance well-being and professional competence (Soliman et al., 2023; Thomas et al., 2024).

However, some studies highlight potential negative aspects of EI, such as the risk of emotional manipulation or increased vulnerability to anxiety in certain contexts (Kilduf et al., 2010; Thomas et al., 2024). These findings suggest that, while EI is generally beneficial, its effects may vary depending on individual and contextual factors.

Self-compassion

In the scientific literature, self-compassion is introduced as an appropriate way of relating to oneself during failure or suffering (Neff, 2022). It comprises three core components: self-kindness, a sense of common humanity, and mindful awareness. Each component also has a negative counterpart, which emerges when self-understanding and acceptance are lacking (Neff, 2003). These components and their opposites interact dynamically, forming a system that influences emotional well-being (Neff, 2022).

Self-kindness is defined as being warm, gentle, and understanding towards oneself when facing failures or misfortunes (Medvedev et al., 2020; Muris & Otgaar, 2023). Its opposite, **self-judgement**, involves being harsh and judgemental towards oneself, often expressing thoughts that one would never direct at a close other (Neff, 2022). Self-kindness and self-judgement are key components of self-compassion that influence the psychological well-being of medical professionals and students. Research indicates that higher self-kindness is associated with lower burnout risk, greater personal resilience, faster recovery from adverse experiences, and higher job satisfaction among physicians (Bogerd et al., 2023; Durkin et al., 2016). It also supports a better work-life balance and more effective self-care, reducing the negative impact of work on personal life (Bogerd et al., 2023). Conversely, excessive self-judgement is linked to depression, social withdrawal, and increased vulnerability to negative thoughts and low mood, adversely affecting mental health (Dundas et al., 2016; Ozmat et al., 2024).

A sense of **common humanity** involves recognising that all people face challenges and suffering in life (Medvedev et al., 2020; Muris & Otgaar, 2023). Failing to internalise this understanding can lead to feelings of **isolation**, which negatively affect psychological well-being, increasing stress, depressive symptoms, and a sense of disconnection (Budzynski-Seymour et al., 2020; Liu et al., 2019; Neff, 2022). Conversely, appreciating the universality of suffering fosters connection, reduces feelings of isolation, and supports emotional resilience (Medvedev et al., 2020; Neff, 2022).

Mindfulness involves being fully present with one's experiences and acknowledging emotional pain without avoidance or amplification (Mustafa et al., 2023; Neff, 2022). Failure to do so can lead to rumination, a pattern of repetitive negative thinking about oneself, emotions, or distressing experiences, which is associated with poor coping, depressive symptoms, and sleep disturbances among students (Bian et al., 2020; Wang & Sun, 2024; Watkins & Roberts, 2020; Xiao et al., 2021). Mindfulness helps individuals recognise and accept their current experience, reducing **over-identification** with negative thoughts and self-judgement, and supporting the development of self-kindness and a sense of common humanity (Neff, 2022).

Research indicates that self-compassion promotes psychological well-being by framing painful experiences, such as mistakes or failures, as opportunities for growth (Babenko & Guo, 2019; Homan, 2016; Yu et al., 2022). It serves as a protective factor, enhancing emotional resilience and enabling better functioning under stress, which is particularly relevant for healthcare professionals and medical students (Moret et al., 2025). Medical students frequently face mental health challenges, including anxiety, depression, and academic stress, which can negatively impact performance and well-being (Guo et al., 2022; Rojas et al., 2023). Self-compassion has been shown to reduce these effects, improving coping, reducing stress and anxiety, and mitigating depressive symptoms (de Souza et al., 2020; Dundas et al., 2016; Poots & Cassidy, 2020).

Burnout is a significant concern for medical students due to academic pressure and exposure to patient suffering (Babenko et al., 2018; Ramos-Vidal & Ruíz, 2023). Self-compassion acts as a protective factor, helping students manage emotional demands and reducing burnout risk (Babenko et al., 2018; Ramos-Vidal & Ruíz, 2023; Rojas et al., 2023). However, excessive self-compassion may also have drawbacks, such as promoting passivity, academic procrastination, or avoidance of difficult emotions, which can hinder proactive behaviour (Iskender, 2011; Neff, 2003; Thomas et al., 2024; Wohl et al., 2017).

Emotional intelligence and self-compassion

Research suggests that while EI and self-compassion are distinct constructs, they are interrelated. The ability to perceive and regulate emotions is associated with higher self-compassion, which in turn supports adaptive responses to personal suffering (Di Fabio & Saklofske, 2021; Moret et al., 2025; Neff, 2003). Studies among nursing students and healthcare professionals indicate that EI skills, such as recognising and managing emotional experiences, are positively linked to self-compassion (Heffernan et al., 2010; Şenyuva et al., 2014).

Both EI and self-compassion play a key role in academic and professional adaptation, particularly under stress or change, enhancing coping, resilience, and psychological well-being (Moret et al., 2025; Thomas et al., 2024). Evidence also suggests a bidirectional relationship: self-compassion can improve emotional perception and regulation, supporting EI development, while higher EI facilitates maintaining self-compassion during challenges (Mamman & Elias, 2018; Moret et al., 2025). Ultimately, this interplay contributes to better mental health, improved patient care, and greater professional satisfaction (Jennings et al., 2024; Moret et al., 2025).

Previous research suggests that EI and self-compassion are distinct but related constructs, both of which contribute to psychological well-being, resilience, and stress management in healthcare settings (Di Fabio & Saklofske, 2021; Moret et al., 2025; Neff, 2003). Based on previous research and theoretical models, it is hypothesised that higher emotional intelligence is associated with greater self-compassion among medical students.

Aim – To analyse the relationship between EI and self-compassion among medical students.

Objectives:

1. To assess the characteristics of emotional intelligence.
2. To analyse the characteristics of self-compassion.
3. To examine the relationship between emotional intelligence and self-compassion.

2. METHODS

Participants and procedure. The study was conducted between December 2, 2024, and January 19, 2025, using an anonymous online survey distributed via the general email system of the Lithuanian University of Health Sciences (LUHS). A non-probability convenience sampling method was employed. The invitation was sent to 1,514 LUHS medical students from years one to six, of whom 234 participated in the survey, yielding a response rate of 15.5%. The main sociodemographic characteristics are presented in Table 1.

Although a formal a priori power analysis was not conducted, past research suggests that a sample size of at least 149 participants is generally adequate for conducting both parametric and non-parametric correlation analyses with sufficient confidence interval precision (Bujang, 2024).

As shown in Table 1, the age distribution of participants is relatively even; however, this does not apply to sex. According to data from Statistics Lithuania, in 2017, 72.55% to 74.84% of students enrolled in programmes of health sciences were women. Therefore, this study partly reflects the sex distribution within the field of health sciences in Lithuania. The average age of the students was 22.14 (±3.51). Additionally, most participants were from the first and fourth years of study.

Table 1. **Sociodemographic characteristics**

Characteristic		n (%)
Sex	Male	37 (15.8)
	Female	195 (83.3)
	I prefer not to say	2 (0.9)
Age	18–21 years	110 (47.0)
	22–46 years	124 (53.0)
Study course	1st year	48 (20.5)
	2nd year	46 (19.7)
	3rd year	25 (10.7)
	4th year	48 (20.5)
	5th year	39 (16.7)
	6th year	28 (12.0)

Research instruments. The study consisted of three questionnaires: the Schutte Self-Report Emotional Intelligence Test (SSEIT), the Self-Compassion Scale (SCS), and sociodemographic questions (regarding age, sex, and year of study).

The Schutte Self Report Emotional Intelligence Test (SSEIT) questionnaire consists of 33 items, covering four subscales that reflect the main components of emotional intelligence:

- **Perception of emotions** – the ability to recognise, understand, and name one's own emotions and those observed in others, expressed through facial expressions, voice, or behaviour.
- **Managing self-relevant emotions –** the ability to control one's emotional reactions and maintain emotional balance when facing stressful situations.
- **Managing others' emotions –** the ability to influence the emotional states of others and help them cope with emotional challenges.
- **Utilisation of emotions** – the ability to use emotions to enhance cognitive processes, creativity, and problem-solving.

The participants answered the questions using a 5-point Likert scale (1 – 'strongly disagree', 5 – 'strongly agree'). The EI score was calculated by summing the points from each subscale – the higher the score, the higher the level of emotional intelligence.

Cronbach's α for the emotion perception subscale was 0.86, for the emotion regulation subscale 0.80, for the others' emotion regulation subscale 0.70, and for the emotion utilisation subscale 0.78. The overall Cronbach's α for the SSEIT scale was 0.91.

The Self-Compassion Scale (SCS) was chosen to assess the level of self-compassion. The questionnaire consists of 26 items covering six subscales:

- **Self-kindness** refers to the ability to be gentle, supportive, and understanding towards oneself, especially during times of suffering.
- **Self-judgement** is defined as self-criticism, blaming, or belittling oneself during times of distress.
- **Common humanity** reflects the recognition that personal difficulties are a universal human experience that connects all individuals.
- **Isolation** reflects the feeling that one is alone in facing difficulties, creating a sense of separateness.
- **Mindfulness** represents a balanced awareness of the present experience, allowing acknowledgement of pain without avoidance.
- **Over-identification** reflects excessive involvement with negative thoughts or feelings, causing temporary experiences to be perceived as permanent.

Participants responded to the items using a 5-point Likert scale (1 – 'almost never', 5 – 'almost always'). According to the questionnaire author's recommendation, the mean score for each subscale was calculated, and the overall self-compassion score was obtained as the average of the six subscale means. The higher this average, the higher the level of self-compassion.

The reliability of this scale was Cronbach's $\alpha = 0.91$. The Cronbach's α values for the subscales were as follows: self-kindness = 0.79, self-judgement = 0.66, common humanity = 0.66, isolation = 0.71, mindfulness = 0.59, and over-identification = 0.73.

The mindfulness subscale demonstrated the lowest Cronbach's α (0.59), which falls below the commonly accepted threshold of 0.70, indicating limited internal consistency. Therefore, the results of this subscale will be interpreted with caution.

Data analysis methods. Statistical analysis was performed using IBM SPSS Statistics for Windows version 30.0. Results were considered statistically significant when the p-value was less than 0.05. The normality of continuous variables was assessed by skewness and kurtosis values (the normality assumption was rejected if values were outside the range of [–1, 1]), visually using scatterplots, and by the Kolmogorov–Smirnov and Shapiro–Wilk tests (normality assumption rejected when $p < 0.05$). Since all continuous variables in the study were not normally distributed, the Mann–Whitney U test for independent samples was used to assess differences between sex and age groups related to EI and self-compassion. The Kruskal–Wallis test was applied to examine differences between study years. For the comparison of subscale scores, the Friedman test was applied to assess differences across related subscales, followed by post hoc pairwise comparisons where appropriate. Spearman's correlation was used to determine the relationship between EI and self-compassion. The effect size for Mann–Whitney U test (r) was calculated and interpreted according to Cohen's guidelines: small (0.00–0.29), medium (0.30–0.49), or large (0.50 and above) (Sullivan & Feinn, 2012). The effect size for Kruskal–Wallis test (η^2) was calculated and

interpreted according to Cohen's guidelines: small (0.00–0.05), medium (0.06–0.13), or large (0.14 and above) (Sullivan & Feinn, 2012).

3. RESULTS

Emotional intelligence

Medical students demonstrated a fairly high level of EI (Median (Mdn) = 125, Q1–Q3 = 116–135). Participants performed best in the use of emotions (Mdn = 25), and the most challenging area was the regulation of others' emotions (Mdn = 29). A more detailed overview of medical students' EI is presented in Table 2. Friedman test indicated statistically significant differences between the four EI subscales ($\chi^2 = 495.81$, $p < 0.001$). Post hoc pairwise comparisons revealed that all subscales differed significantly from one another ($p < 0.001$).

Table 2. **Descriptive statistics of the Emotional Intelligence Scale and its subscales**

Subscales and Scale of Emotional Intelligence	Theoretical range of values	Median	Q1–Q3	χ^2, p	Pairwise comparisons
Perception of emotions	10–50	38	34; 41	495.81, **p < 0.001***	**p < 0.001****
Managing self-relevant emotions	9–45	34	30; 38		
Managing others' emotions	8–40	29	26; 32		
Utilisation of emotions	6–30	25	22; 27		
Total EI score	33–165	125	116; 135		

Notes: *$p = < 0.05$; **$p < 0.001$ *for all pairs.*

Subsequently, the relationship between medical students' EI and their social and demographic characteristics was assessed. First, comparing the overall EI scores by sex revealed no statistically significant difference between male and female participants' total EI (U = 3,900.5; p = 0.434). A more detailed analysis of the results (Table 3) showed that females scored higher on the emotion perception subscale than males, but this difference was not statistically significant ($p > 0.05$). Additionally, no statistically significant differences were found between other EI subscales and sex ($p > 0.05$).

Table 3. **Relationship between emotional intelligence and sex**

Emotional Intelligence Scale		Mean rank	U	p	r
Perception of emotions	Male	98.00	4,292.0	0.067	0.12
	Female	120.01			
Managing self-relevant emotions	Male	124.62	3,307.0	0.421	0.00
	Female	114.96			
Managing others' emotions	Male	109.97	3,849.0	0.518	0.04
	Female	117.74			
Utilisation of emotions	Male	111.16	3,805.0	0.596	0.04
	Female	117.51			
Total EI score	Male	108.58	3,900.5	0.434	0.05
	Female	118.00			

Comparing the overall EI scores and subscale scores across age groups (Table 4) revealed no statistically significant relationship ($p > 0.05$). This indicates that the overall level of emotional intelligence, as well as the ability to perceive, regulate, and use emotions among medical students, is not associated with age.

Table 4. **Associations between participants' age groups and emotional intelligence**

Emotional Intelligence Scale		Mean rank	U	p	r
Perception of emotions	18–21 years	114.76	7,121.5	0.559	0.04
	22–46 years	119.93			
Managing self-relevant emotions	18–21 years	116.66	6,912.0	0.858	0.01
	22–46 years	118.24			
Managing others' emotions	18–21 years	114.20	7,183.0	0.481	0.05
	22–46 years	120.43			
Utilisation of emotions	18–21 years	119.66	6,582.0	0.644	0.00
	22–46 years	115.58			
Total EI score	18–21 years	115.33	7,058.5	0.644	0.03
	22–46 years	119.42			

Although certain differences in EI and its subscales were observed across study years (Table 5), statistical significance was not confirmed ($p > 0.05$).

Table 5. **Comparison of emotional intelligence by study year**

Self-compassion subscales and Scale of Emotional Intelligence		Mean rank	H	p	η^2
Perception of emotions	1st year	115.94	2.76	0.737	0.00
	2nd year	112.15			
	3rd year	116.22			
	4th year	130.33			
	5th year	118.42			
	6th year	106.82			
Managing self-relevant emotions	1st year	125.81	7.25	0.203	0.01
	2nd year	121.73			
	3rd year	108.52			
	4th year	130.01			
	5th year	110.64			
	6th year	92.43			
Managing others' emotions	1st year	105.92	4.22	0.518	0.00
	2nd year	120.88			
	3rd year	124.58			
	4th year	129.32			
	5th year	107.13			
	6th year	119.66			
Utilisation of emotions	1st year	121.92	4.35	0.501	0.00
	2nd year	125.72			
	3rd year	118.54			
	4th year	115.19			
	5th year	121.13			
	6th year	94.41			
Total EI score	1st year	117.08	4.82	0.438	0.00
	2nd year	119.24			
	3rd year	115.80			
	4th year	132.58			
	5th year	111.85			
	6th year	98.89			

Self-compassion

The study found that the average self-compassion scores among medical students ranged from 1.49 to 4.09 out of the possible five points (Table 6). The median score for self-compassion was 2.89 (interquartile range: 2.48; 3.24). Scores from 1.0 to 2.49 indicate low self-compassion, from 2.5 to 3.5 indicate moderate self-compassion, and from 3.51 to 5.0 indicate high self-compassion. Therefore, it can be concluded that medical students exhibit a moderate level of self-compassion.

Table 6. **Descriptive statistics of the self-compassion scale and subscales**

Self-compassion subscales and scale	Theoretical range of values	Median	Q1–Q3
Self-kindness	1–5	2.8	2.2; 3.4
Self-judgement	1–5	2.6	2.2; 3.2
Common humanity	1–5	3.25	2.75; 4
Isolation	1–5	2.5	2; 3.25
Mindfulness	1–5	3.25	2.75; 3.75
Over-identification	1–5	2.5	2; 3
Total self-compassion score	1–5	2.89	2.48; 3.24

Friedman test revealed statistically significant differences between the six self-compassion subscales ($\chi^2 = 263.61$, $p < 0.001$) (Table 7). Post hoc pairwise comparisons indicated that most subscales differed significantly from one another ($p < 0.001$). However, no significant differences were observed between self-judgement and mindfulness, self-judgement and over-identification, common humanity and mindfulness, or isolation and over-identification ($p > 0.05$).

Table 7. **Pairwise comparison of self-compassion subscales**

Self-compassion subscales	χ^2, p	1	2	3	4	5	6
1. Self-kindness	263.61, p < 0.001	–	p = 0.006*	p < 0.001*	p = 0.011*	p < 0.001*	p < 0.001*
2. Self-judgement		–	–	p < 0.001*	p = 0.834	p < 0.001*	p = 0.186
3. Common humanity		–	–	–	p < 0.001*	p = 0.084	p < 0.001*
4. Isolation		–	–	–	–	p < 0.001*	p = 0.126
5. Mindfulness		–	–	–	–	–	p < 0.001*
6. Over-identification		–	–	–	–	–	–

Note: *$p = < 0.05$.

The self-compassion subscales were divided into positive and negative strategies to review which are most commonly used by the medical students. The data revealed (Table 8) that participants are more inclined to show kindness to themselves, experience a stronger sense of common humanity, and demonstrate higher mindful awareness (i.e. positive strategies that enhance self-compassion) compared to self-judgement, isolation, and over-identification (i.e. negative strategies that reduce self-compassion).

Table 8. **Descriptive statistics of self-compassion strategies**

Self-compassion strategies	Median	Q1–Q3	χ^2, p
Positive	3.12	2.67; 3.58	86.01, $p < 0.001$
Negative	2.57	2.13; 3.09	

Despite the fact that the average ranks of self-compassion subscales were generally higher in men (Table 9) than in women, these differences were not statistically significant ($p > 0.05$).

Table 9. **Associations between self-compassion and sex**

Self-compassion subscales and scale		Mean rank	U	p	r
Self-kindness	Male	123.05	3,365.0	0.516	0.00
	Female	115.26			
Self-judgement	Male	112.03	3,773.0	0.657	0.03
	Female	117.35			
Common humanity	Male	124.43	3,314.0	0.431	0.00
	Female	114.99			
Isolation	Male	128.59	3,160.0	0.230	0.00
	Female	114.21			
Mindfulness	Male	128.32	3,170.0	0.239	0.00
	Female	114.26			
Over-identification	Male	132.80	3,004.5	0.106	0.00
	Female	113.41			
Total self-compassion score	Male	128.85	3,150.5	0.222	0.00
	Female	114.16			

Four statistically significant differences were found between self-compassion and age groups (Table 10). Older medical students exhibited higher self-judgement ($U = 7{,}924.5$, $p = 0.032$), felt more isolated ($U = 8{,}292.5$, $p = 0.004$), and were more likely to identify with their negative thoughts and feelings ($U = 8{,}249.0$, $p = 0.005$) compared to younger students. Interestingly, despite engaging more frequently in these negative self-compassion strategies, older students also demonstrated significantly higher overall self-compassion than younger participants ($U = 7{,}861.5$, $p = 0.044$), indicating a paradoxical pattern in their self-compassion profile.

Table 10. **Associations between participants' age and self-compassion**

Self-compassion subscales and scale		Mean rank	U	p	r
Self-kindness	18–21 years	114.55	7,144.0	0.530	0.04
	22–46 years	120.11			
Self-judgement	18–21 years	107.46	7,924.5	**0.032***	0.14
	22–46 years	126.41			
Common humanity	18–21 years	117.45	6,826.0	0.991	0.00
	22–46 years	117.55			
Isolation	18–21 years	104.11	8,292.5	**0.004***	0.19
	22–46 years	129.38			
Mindfulness	18–21 years	118.29	6,733.5	0.866	0.00
	22–46 years	116.80			
Over-identification	18–21 years	104.51	8,249.0	**0.005***	0.18
	22–46 years	129.02			
Total self-compassion score	18–21 years	108.03	7,861.5	**0.044***	0.13
	22–46 years	125.90			

Note: *$p = < 0.05$.

The analysis showed that the overall self-compassion score differed significantly between study years (H = 11.70, p = 0.039). Table 11 shows that medical students in the 4th year demonstrated significantly higher self-compassion, while the lowest self-compassion scores were observed among 6th year students (mean ranks of 137.00 and 88.52, respectively). Further analysis of the study year by individual self-compassion subscales revealed statistically significant differences in isolation (H = 14.13, p = 0.015) and over-identification (H = 15.10, p = 0.010) subscales. More detailed analysis showed that the 6th year was associated with a weaker sense of isolation and over-identification. Meanwhile, the 5th year was associated with a stronger sense of isolation, and the 4th year with over-identification. No statistically significant differences were observed between study years for self-kindness, self-judgement, common humanity, and mindfulness subscales (p > 0.05).

Table 11. **Comparison of self-compassion by medical students' study year**

Self-compassion subscales and scale		Mean rank	H	p	η^2
Self-kindness	1st year	106.22	7.79	0.168	0.01
	2nd year	121.72			
	3rd year	129.08			
	4th year	132.15			
	5th year	117.54			
	6th year	94.41			
Self-judgement	1st year	118.11	3.77	0.583	0.00
	2nd year	108.91			
	3rd year	108.94			
	4th year	132.94			
	5th year	114.05			
	6th year	116.54			
Common humanity	1st year	121.86	2.91	0.714	0.00
	2nd year	114.71			
	3rd year	119.58			
	4th year	118.40			
	5th year	125.90			
	6th year	99.52			
Isolation	1st year	115.78	14.13	**0.015***	0.04
	2nd year	97.37			
	3rd year	121.14			
	4th year	135.13			
	5th year	136.54			
	6th year	93.54			
Mindfulness	1st year	118.55	1.98	0.852	0.01
	2nd year	121.40			
	3rd year	122.24			
	4th year	120.13			
	5th year	116.91			
	6th year	101.38			
Over-identification	1st year	119.45	15.10	**0.010***	0.04
	2nd year	97.92			
	3rd year	107.06			
	4th year	141.00			
	5th year	131.78			
	6th year	95.46			
Total self-compassion score	1st year	119.13	11.70	**0.039***	0.03
	2nd year	104.71			
	3rd year	116.78			
	4th year	137.00			
	5th year	127.86			
	6th year	88.52			

Note: *$p = < 0.05$.

The relationship between EI and self-compassion

The aim was to evaluate the relationship between EI and self-compassion among medical students. The findings indicated a statistically significant weak positive correlation between EI and self-compassion (rho = 0.41, p < 0.001) (Table 12). This indicates that medical students with higher EI tend to exhibit greater self-compassion.

To further explore the associations between EI and self-compassion, a correlational analysis was conducted using the subscales of these constructs. Medical students with better emotional perception were more likely to demonstrate kindness towards themselves (rho = 0.20, p = 0.003), experience a stronger sense of common humanity (rho = 0.25, p < 0.001), and exhibit higher mindfulness (rho = 0.30, p < 0.001). Although emotional perception increased the use of positive self-compassion strategies, a very weak but statistically significant correlation was also found with a negative strategy of isolation (rho = 0.16, p = 0.017).

The ability of medical students to regulate their own emotions was found to be statistically significantly, albeit weakly, correlated with all self-compassion strategies (p < 0.05). This indicates that the capacity to control experienced emotions increases the expression of self-kindness (rho = 0.42, p < 0.001), enhances the sense of common humanity (rho = 0.41, p < 0.001) and mindfulness (rho = 0.41, p < 0.001). However, emotional regulation skills may also increase self-judgement (rho = 0.35, p < 0.001), isolation (rho = 0.42, p < 0.001), and over-identification (rho = 0.43, p < 0.001) with negative thoughts and feelings among medical students.

The ability to regulate others' emotions promotes medical students' self-kindness (rho = 0.25, p < 0.001), sense of common humanity (rho = 0.22, p < 0.001), and mindfulness (rho = 0.29, p < 0.001). Nonetheless, this ability is also associated with self-judgement (rho = 0.18, p = 0.005) and isolation (rho = 0.14, p = 0.029).

Of all the EI subscales, only the use of emotions was associated solely with positive self-compassion strategies (p < 0.05). The ability to use emotions increases the expression of self-kindness (rho = 0.13, p = 0.043), mindfulness (rho = 0.27, p < 0.001), and strengthens the sense of common humanity (rho = 0.21, p = 0.001).

Table 12. **Associations between emotional intelligence and self-compassion**

Emotional intelligence Total		**Self-compassion**						
		Self-kindness	Self-judgement	Common humanity	Isolation	Mindfulness	Over-identification	
Emotion perception	**rho**	–	0.20	0.10	0.25	0.16	0.30	0.09
	p	–	**0.003***	0.168	**<0.001***	**0.017***	**<0.001***	0.188
Managing self-relevant emotions	**rho**	–	0.42	0.35	0.41	0.42	0.41	0.43
	p	–	**<0.001***	**<0.001***	**<0.001***	**<0.001***	**<0.001***	**<0.001***
Managing others' emotions	**rho**	–	0.25	0.18	0.22	0.14	0.29	0.11
	p	–	**<0.001***	**0.005***	**<0.001***	**0.029***	**<0.001***	0.083
Utilising emotions	**rho**	–	0.13	0.009	0.27	0.02	0.21	–0.08
	p	–	**0.043***	0.887	**<0.001***	0.769	**0.001***	0.215
Total	**rho**	0.41	–	–	–	–	–	–
	p	**<0.001***	–	–	–	–	–	–

Note: * *p = < 0.05.*

4. DISCUSSION

Emotional intelligence

Comparing the results with previous studies related to overall EI levels and specific abilities across sex, few differences are observed. Although it is suggested that EI levels remain similar between males and females due to compensatory EI skills, Salahuddin et al. (2025) found that female medical students are better at perceiving emotions, whereas males are better at regulation. Such differences may arise from socialisation processes, where children are raised according to different social expectations.

Additionally, this study found no differences in EI between the two age groups. These results are consistent with previous research, although the literature indicates that certain EI abilities may vary with age. It has been suggested that students' ability to perceive and regulate others' emotions improves with age (Abdollahpour et al., 2016; Silva & Toledo, 2021). This ambiguity in findings may be related to the fact that EI develops not only with age but also through various life experiences. For example, academic success (Altwijri et al., 2021) and work experience (Shipley & Jackson, 2010) have been shown to enhance EI skills. Additionally, higher-achieving students may develop stronger EI abilities due to better self-regulation, which allows them to prioritise studies effectively (Shipley & Jackson, 2010). Daily events, such as social interactions with friends or successes and failures in academic tasks, have been shown to influence emotion regulation (Nezlek, 2005). Therefore, the variety and accumulation of life and academic experiences across participants may help explain why no significant differences in EI were observed between the two age groups in this study.

The obtained results, indicating that medical students' EI remains similar across each year of study, contradict previous research findings. A decrease in EI has been observed from the beginning of medical studies to the second year, as well as when transitioning from the fifth to the sixth year (Elsayed et al., 2024; Shariatpanahi et al., 2022). One possible explanation for the observed discrepancies is that first-year students may experience less negative emotion, as the initial stress of medical school could be buffered by the positive feelings associated with admission (Elsayed et al., 2024). In contrast, in the later years of study, clinical practice introduces greater emotional demands and responsibility (Coulehan, 1995; Palavicini, 2022). Direct exposure to patients' suffering, the risk of making mistakes, and the burden of responsibility may erode specific EI subcomponents such as empathy (Neumann et al., 2011; West et al., 2006). This is consistent with the findings that difficulties in emotion regulation predict lower empathic concern and perspective taking, while simultaneously increasing personal distress (Ardenghi et al., 2021). Furthermore, in the final year, the additional pressure of high-stakes graduation examinations may exacerbate emotional strain, further reducing students' capacity for empathic engagement (Shaji, 2024). This pattern resonates with the findings of the present study, which also indicated that not all EI subscales changed uniformly across years of study. This suggests that the progression through medical training may not uniformly reduce all EI components, but rather differentially affect them, with empathy being particularly vulnerable to decline under emotional and academic strain.

Self-compassion

The current study partially reflects previous research concerning the manifestation of self-compassion across sex. According to Budakoglu et al. (2014), both male and female medical students exhibit similar levels of self-compassion. However, other studies conducted with students from different fields reveal that women demonstrate lower self-compassion than men (Murn & Steele, 2020; Pereira et al., 2022; Yarnell et al., 2019). These results may be explained by the fact that the participants in the present study were medical students who are exposed to similar emotionally sensitive situations during their studies. Regardless of sex, they may develop comparable skills in coping with emerging difficulties, including the ability to treat themselves with compassion. All these factors may have contributed to the absence of significant differences in self-compassion between sexes.

Older medical students exhibited higher levels of self-compassion, consistent with previous studies (Dev et al., 2020; Godthelp et al., 2020; Murn & Steele, 2020; Tavares et al., 2024). However, a paradoxical pattern emerged: despite reporting greater overall self-compassion, older students also scored higher on self-judgement, feelings of isolation, and over-identification with negative thoughts and emotions. This suggests that self-compassion may coexist with certain negative tendencies, reflecting a more complex profile than would typically be expected. Several explanations may account for this

paradox. Older individuals may place stronger value on traditions and family responsibilities, which has been associated with higher levels of self-compassion compared to younger individuals who are less adherent to such beliefs (Hwang et al., 2016). At the same time, self-judgement attitudes may intensify with age, as greater reflection on past experiences, decisions, and behaviours fosters ongoing self-evaluation (Tavares et al., 2024). Furthermore, older students may experience stronger feelings of isolation due to the need to balance academic work with family or other responsibilities, leading them to perceive challenges that their younger peers are less likely to face. Over time, such pressures may reinforce negative thoughts and tendencies towards over-identification, even when overall self-compassion remains higher.

The literature suggests that individuals may engage in both positive and negative self-compassion strategies (Ullrich-French & Cox, 2020). Such a mixed self-compassion profile may reflect ambivalence, which can arise depending on environmental demands (Gilbert, 2005, as cited in Ullrich-French & Cox, 2020). In this state, individuals may experience both supportive and critical responses towards themselves (Gilbert, 2005, as cited in Ullrich-French & Cox, 2020). Consistent with these findings, the current study identified a mixed self-compassion profile among medical students, indicating that high stress, performance demands, and clinical responsibilities may activate negative self-compassion components while simultaneously requiring positive strategies as a coping resource.

It should be noted that empirical studies directly linking the simultaneous use of both positive and negative self-compassion strategies to stress and performance demands in medical students are currently lacking. Therefore, the explanation provided here represents a plausible interpretation based on theoretical frameworks (e.g. Ullrich-French & Cox, 2020) rather than empirically confirmed evidence. Further research is needed to verify whether high stress, academic pressure, and clinical responsibilities indeed contribute to the emergence of such mixed or ambivalent self-compassion profiles.

The results of the conducted study contradict previous research, which found that the level of self-compassion remains similar across different years of study. However, the current study revealed statistically significant differences in experienced isolation, excessive identification, and overall self-compassion levels according to the year of study. This may be related to the fact that self-compassion is a developing skill that can vary depending on life circumstances, emotional burden, and cultural context, as societal norms and expectations can shape attitudes towards emotional expression and coping.

The relationship between EI and self-compassion

As previously mentioned, the current results indicate a weak positive correlation between EI and self-compassion. This study corroborates findings from other research that identified similarly sized associations between EI and self-compassion among nursing students and nurses (Şenyuva et al., 2014; Thomas et al., 2024). However, certain differences in EI abilities have been observed between medical and nursing student samples. For example, Mamman and Elias (2018) found that nursing students with better emotion perception tended to be more self-judgemental but did not feel isolated. Additionally, the ability to regulate others' emotions, unlike in the present study, was not associated with self-judgement or isolation (Mamman & Elias, 2018). Emotion utilisation was also linked not only to positive self-compassion strategies but to excessive identification (Mamman & Elias, 2018). One possible explanation for these differences is that medical students more frequently encounter intense emotional burdens and a more competitive environment compared to nursing students (Kötter et al., 2017; Weurlander et al., 2019). While such experiences may foster mindfulness, they may also increase the likelihood of internal difficulties such as self-judgement or isolation. In contrast, nursing programmes may place greater emphasis on interpersonal relationships and empathy (Cornine, 2020), which can serve as protective factors against self-judgement and feelings of isolation.

Strengths and limitations

The study revealed several strengths. One of the advantages was the selection of a specific and less frequently studied population in the scientific literature – medical students. This provided new insights into the relationship between EI and self-compassion within the group. Another strength is that the obtained results may be useful in designing programmes aimed at developing and improving the emotional well-being of medical students. Additionally, the more comprehensive analysis of the components of EI and self-compassion conducted in this study allows for a deeper understanding of how these constructs are related and helps identify certain particularities.

Despite its strengths, the study has several limitations. Firstly, the sample consisted solely of medical students from the Lithuanian University of Health Sciences. Therefore, the results may not reflect the experiences of other medical students across Lithuania, which limits the generalisability of the findings to the entire population of medical students. Additionally, there was an uneven sex distribution; as the majority of participants were female, the results may predominantly represent the expression of EI and self-compassion among women. Furthermore, the study collected limited information on the participants' social and demographic characteristics, whereas previous research indicates that factors such as marital status, employment status, or the educational background of medical students' parents may be associated with EI or self-compassion (Abdollahpour et al., 2016; Ranasinghe et al., 2020). Additionally, the mindfulness subscale demonstrated low internal consistency (Cronbach's $\alpha = 0.59$), suggesting that findings related to this subscale may be unreliable and should be interpreted cautiously; future research should consider using a more reliable measure or further validating this subscale. The study did not include regression analyses, which limits the ability to examine potential predictors or confounding factors affecting the relationship between emotional intelligence and self-compassion. Future studies should improve subscale reliability and consider advanced statistical methods.

Recommendations for future research. There is a lack of information in the scientific literature regarding the relationship between self-compassion and year of study. Therefore, it would be beneficial to conduct more comprehensive studies in the future that include a larger number of participants from different study years. Additionally, future research should consider forming homogeneous sex groups to better understand differences in EI and self-compassion among medical students based on sex. Furthermore, to assess differences in the relationship between EI and self-compassion among nursing and medical students, it is recommended to conduct further studies that include nursing students in the sample.

5. CONCLUSIONS

1. Medical students demonstrate a relatively high level of emotional intelligence. They find it easiest to use emotions, while regulating others' emotions poses the greatest difficulty. Emotional intelligence does not differ by sex, age, or year of study.
2. The participants exhibit a moderate level of self-compassion. They more frequently employ positive self-compassion strategies (kindness towards self, sense of common humanity, mindfulness). Older medical students show higher levels of self-compassion but are also more prone to self-judgement, isolation, and over-identification. It was found that self-compassion differs statistically significantly between students of different study years.
3. A statistically significant relationship between emotional intelligence and self-compassion was identified. Medical students with higher emotional intelligence demonstrate greater kindness towards self, mindfulness, and sense of common humanity, but may also be more self-judgemental and experience stronger feelings of isolation and over-identification.

Author Contributions: Conceptualisation, D.A. and E.L.; methodology, D.A.; software, E.L.; validation, E.L. and D.A.; formal analysis, E.L.; investigation, E.L.; resources, D.A.; data curation, E.L.; writing—original draft preparation, E.L.; writing—review and editing, D.A.; visualisation, E.L.; supervision, D.A.; project administration, D.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Acknowledgements: None.

Conflicts of Interest: The authors declare no conflict of interest.

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Received on June 30, 2025
Accepted on September 25, 2025