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CHARACTERISTICS OF PSYCHOSOCIAL ADAPTABILITY IN STUDENTS

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Abstract

This study examines students' psychosocial adaptability, conceptualised as a set of self-regulatory resources and social competencies that support university integration and quality of life. Using a sample of N = 420 students from Romania (n = 257) and the Republic of Moldova (n = 163), the MLO-AM, AMS, and a global adaptability/flexibility test (Adap) were administered, alongside demographic items, items on a prior diagnosis of anxiety, and the use of essential oils to reduce anxiety. Analyses (independent-samples t tests; one-way ANOVA with Tukey post hoc tests; p < 0,05) idntified differentiated profiles: students from Romania obtained higher mean scores on most specific dimensions (adaptive potential, stability, communication, and socio-educational needs), whereas global flexibility was slightly higher among students from the Republic of Moldova. Age, study cycle/year, and marital status showed robust effects, indicating higher levels of stability, communication, and integration among mature students and/or those at more advanced academic levels. A prior diagnosis of anxiety was associated with lower adaptability, and the use of aromas was linked to moderate advantages in socio-communicative functioning and professional orientation. The conclusions support the need for targeted psychoeducational interventions for groups with adaptive vulnerability.

Keywords: *psychosocial adaptability; students; quality of life; anxiety; aromatherapy*

1. INTRODUCTION

The student period represents an interval of accelerated transition, during which individuals simultaneously reorganise social roles, an emerging professional identity, and self-regulatory routines. The shift from relatively predictable educational structures to a competitive university environment, characterised by high autonomy and frequent exposure to evaluation, amplifies decisional pressure, cognitive demands, and the need for social integration. Within this context, psychosocial adaptability becomes a central construct: it reflects students' capacity to manage environmental demands, maintain functional relationships, adjust coping strategies, and preserve a satisfactory level of well-being.

Contemporary literature places psychosocial adaptability in close proximity to quality of life, given that well-being cannot be reduced to the absence of symptoms or to material resources, but includes how individuals evaluate their lives relative to their expectations, values, and opportunities. In the Romanian sociological and psychosocial tradition, quality of life is described as the set of elements characterising the physical, economic, social, cultural, political, and health-related circumstances in which people live (Mărginean & Bălașa, 2002), and the quality-of-life paradigm integrates objective determinants and subjective appraisals within a systemic perspective (Mărginean et al., 2011). Internationally, the definition and

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measurement of quality of life have been consolidated through the WHOQOL framework, which conceptualises quality of life as individuals' perception of their position in life within their cultural and value context, in relation to goals, expectations, and concerns (WHO, 1996; WHOQOL Group, 1998).

For students, quality of life is sensitive to adaptive resources—social support, relational competencies, optimism, and effective problem solving—but also to risk factors such as anxiety. Cognitive models describe anxiety as arising from threatening interpretations and avoidance strategies that, although reducing distress in the short term, tend to maintain vulnerability and restrict social or academic participation (Beck & Emery, 1985). In the university environment, academic anxiety can interfere with activity organisation, flexible use of cognitive strategies, and adaptation to performance demands (Toma, 2018). At the same time, the literature suggests that better adaptability, particularly through social resources and self-regulation, is associated with higher life satisfaction and more stable psychological functioning.

Accordingly, this article aims to synthesise theoretical and empirical foundations relevant to understanding the characteristics of psychosocial adaptability in students, through a review of the evolution of the quality-of-life concept, key approaches to psychosocial adaptation, and the mechanisms linking adaptability to well-being and anxiety in educational contexts.

Literature Review

1. Conceptual evolution of quality of life and the shift towards multidimensional models

In the initial phase of well-being research, assessments of prosperity were strongly anchored in economic indicators and comparisons of income levels. The development of aggregate measures of production and income provided a standardised language for describing "living standards" (Crum, 1935), yet it became evident that economic performance does not sufficiently capture the subjective experience of life or the actual distribution of opportunities. A major contribution to this paradigm shift is associated with the debate on the "Easterlin paradox", according to which economic growth does not automatically translate into proportionate increases in reported satisfaction, particularly beyond certain income thresholds (Easterlin, 1974). Subsequent analyses have nuanced the growth–well-being relationship, arguing that effects may be more consistent under particular historical and methodological conditions (Stevenson & Wolfers, 2008); however, the consensus has remained that well-being must be examined within a broader framework than the economic one.

In psychology, this broadening was achieved through the distinction between hedonic well-being (satisfaction, positive/negative affect) and eudaimonic well-being (meaning, autonomy, personal development), with an emphasis on optimal functioning (Ryan & Deci, 2001). Large-scale reviews of subjective well-being research have shown the accumulation of consistent evidence regarding the role of personal appraisals and social contexts in explaining interindividual variation (Diener et al., 1999). At the same time, the quality-of-life literature has treated the construct as an umbrella concept that can be partially explained by psychological well-being, yet requires the integration of life domains and social resources (Ring et al., 2007; Sirgy et al., 2006).

From a public policy perspective, multidimensional approaches have emphasised that well-being depends on real capabilities and freedoms, not solely on resources. Sen's (1999) capabilities approach offered an interpretative framework in which quality of life derives from the opportunity to choose and to achieve valued functionings. In an applied logic, the UNDP Human Development Report (1990) crystallised an integrative view of development by combining health, education, and resource indicators. More recently, the literature on multidimensional poverty measurement has provided methodological tools to capture multiple

deprivations and unequal distributions of well-being (Alkire & Foster, 2011). Within Europe, Eurostat's quality-of-life indicators cover domains such as material conditions, health, education, leisure time, and social relationships, providing a comparative framework across countries and population groups (Eurostat, 2022, 2023).

2. Measurement clarifications between objective criteria and subjective appraisals

A recurring issue in the field concerns overlap between quality of life, health status, and daily functioning. A critical appraisal of instruments used in research highlighted the risk that some measures capture symptom severity or functional limitations rather than an overall appraisal of life (Gill & Feinstein, 1994). In addition, terminological differences between "well-being", "satisfaction", "happiness", and "quality of life" may generate interpretative confusion, which justifies efforts towards conceptual clarification and integration (Haas, 1999).

Within this framework, WHOQOL instruments were designed as generic, cross-culturally comparable measures explicitly oriented towards individuals' subjective perceptions across fundamental life domains. WHOQOL-BREF provides an assessment structure including physical, psychological, social relationships, and environment domains, alongside a global appraisal of quality of life (WHO, 1996; WHOQOL Group, 1998). Relevance for student populations is also supported by validation studies confirming the instrument's use in academic contexts, including among medical students (Krăgeloh et al., 2011). Thus, quality of life can be investigated both as an outcome of adaptation to the university environment and as an indicator of psychosocial resources and vulnerabilities.

3. Psychosocial adaptation and adaptability

Psychosocial adaptation has attracted psychologists' interest in relation to the interaction between individuals and the social environment, being analysed both as a process and as an outcome. A systemic approach maintains that optimal adaptation involves constructing an interaction structure that enables individuals to meet needs, maintain identity, and function effectively in changing contexts (Melnikova, 2002). This perspective highlights several distinctive properties: the dynamic character of adaptation, its unfolding across development, the individualisation of response modalities, and the person's transformative role with respect to the environment—not only the environment's effects on the person (Melnikova, 2002).

In social psychology, psychosocial adaptation is described as an optimal ratio between the goals and values of the individual and those of the group, resulting from social interaction and the internalisation of relevant norms (Krâsiko, 2007). From this standpoint, psychosocial adaptability may be treated as a personality quality, reflected in flexibility, self-regulation, role negotiation capacity, and competence in maintaining functional relationships. Within the Republic of Moldova, analyses of psychosocial adaptation have explicitly included the role of value orientations and personal resources in shaping adaptive responses, emphasising that adaptation entails both internal change and contextual adjustment (Paladi, 2021, 2022).

A key operational core of adaptability is social competence. The relationship between adaptive behaviour and social skills raises definitional and assessment issues; however, there is consensus that these domains are interdependent, and that interventions targeting social skills may influence integration and everyday functioning (Gresham & Elliott, 1987). In school and adolescent populations, social competence has been associated with psychological well-being and better integration in educational contexts, suggesting a psychosocial protective mechanism (Holopainen et al., 2012). For students, this relationship is particularly relevant, because integration into learning groups, collaboration, and conflict management are components of academic success and subjective well-being.

4. Psychological determinants of adaptability and quality of life

The relationship between adaptability and well-being is influenced by the quality of social support. Studies examining adaptability and life satisfaction indicate that social support

may amplify the benefits of adaptability by functioning as a moderating factor: adaptable individuals report greater satisfaction when they have consistent relational resources (Mi & Weipeng, 2016). In a similar logic, optimism is associated with the use of active coping strategies, which may support persistence in tasks and reduce the impact of stressors on well-being (Nes & Segerstrom, 2006). For students, these resources may operate as buffers in the face of repeated evaluations, professional uncertainty, and performance pressure.

The university environment also includes specific vulnerabilities. Perfectionism may increase the risk of hopelessness and may affect academic performance through excessive standards and self-criticism, which can deteriorate perceived quality of life and integration within the academic community (Marian, 2023). Moreover, academic anxiety may interact with cognitive styles and learning strategies, affecting planning, cognitive flexibility, and self-regulation (Toma, 2018). Theoretically, cognitive models of anxiety explain symptom persistence through threatening interpretations and avoidance of feared situations, mechanisms that may reduce social and academic engagement (Beck & Emery, 1985). These mechanisms suggest that anxiety can function as a disruptive factor for adaptation, while interventions centred on cognitive restructuring and behavioural exposure may have indirect effects on quality of life.

Overall, the specialist literature outlines a robust convergence: quality of life is a multidimensional construct sensitive to adaptive resources and processes; psychosocial adaptability, understood as a process and a quality of social functioning, is associated with well-being and satisfaction, particularly when supported by social support and effective coping; and anxiety constitutes a risk factor that can compromise both adaptation and perceived quality of life. For students, this convergence justifies investigating adaptive profiles and their determinants, with an emphasis on relational and emotional variables within an assessment framework that is comparable and context-sensitive.

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The study aims to assess students' psychosocial adaptability and to identify how it varies as a function of a series of individual factors. The primary objective is to determine whether statistically significant differences exist in levels of psychosocial adaptability among students, depending on independent variables such as: country of origin (Romania vs. the Republic of Moldova), gender, age category, study cycle (bachelor's vs. master's), year of study, academic achievement, background environment (urban vs. rural), marital status, essential oil use, a prior diagnosis of anxiety, and the use of aromas to reduce anxiety. Psychosocial adaptability was operationalised across multiple dimensions (subscales)—personal adaptive potential, neuropsychic stability, communication capacities, moral norms—and through the degree of satisfaction of various needs (socio-communicative, ecosocial, socioeconomic, communication with close others, peers and teaching staff, professional identification and training, and time management). Global adaptability/flexibility was also evaluated through a specific test. A secondary objective was to compare student groups defined by these variables in order to highlight potential differentiated adaptability profiles (e.g., married vs. unmarried students; students with vs. without a diagnosis of anxiety), with relevance for psychoeducational support.

2.2. HYPOTHESES

In line with the literature and the educational context, the following working hypotheses were formulated:

H1: There are significant differences between students from Romania and those from the Republic of Moldova with respect to psychosocial adaptability. Students from Romania are expected to obtain higher mean scores on most adaptability dimensions (e.g., adaptive potential, neuropsychic stability), given socio-cultural and educational differences.

H2: Psychosocial adaptability differs by gender, with women showing slightly higher levels on certain dimensions (e.g., satisfied socio-communicative needs) compared with men.

H3: Age influences adaptability: older students will have higher adaptability scores (due to maturation and life experiences) than younger students. An ascending trend is anticipated across age categories (18–21 years < 22–34 years < over 35 years).

H4: There will be significant differences by study cycle—master's students are expected to show more developed psychosocial adaptability (e.g., communication competencies, emotional stability) than bachelor's students, due to transition to a higher academic level.

H5: Psychosocial adaptability varies by year of study. Students in final years (e.g., Year III bachelor's, Year II master's) will report higher levels of adaptation (aligned with increased academic demands) than those at the beginning of university.

H6: Academic achievement is positively associated with adaptability. Students with high academic performance (mean grades 9–10) will obtain higher adaptability scores (e.g., personal adaptive potential, professional identification), whereas students with low performance (below grade 7) may show adaptation difficulties (lower emotional stability, communication, etc.).

H7: Background environment influences adaptation: students from urban environments will have higher psychosocial adaptability than those from rural environments, given the diverse opportunities for socialisation and education in urban settings.

H8: Marital status has a significant effect—married students are anticipated to display higher adaptability (potentially being more stable and socio-familially integrated) than unmarried students.

H9: Students who use essential oils (Lavender, Bergamot, Ylang-Ylang) for general purposes will have slightly better adaptability (possibly due to an interest in self-care and stress-management strategies) than students who do not use such aromas.

H10: Students with a prior diagnosis of anxiety will display lower levels of psychosocial adaptability (e.g., lower emotional resilience, communication and integration difficulties) than those without such a diagnosis.

H11: Using aromas to reduce anxiety (aromatherapy as a coping method) is associated with higher adaptability. Students who use aromas to manage anxiety are assumed to show slight adaptive advantages (e.g., better satisfied ecosocial needs) compared with those who do not use this strategy.

3. METHOD

Participants. The study included a sample of N = 420 students from two university centres (Romania and the Republic of Moldova). The gender distribution was unbalanced in favour of women (approximately 83% female, 17% male), reflecting the structure of the participating student population. Students' mean age was ~22 years, with subgroups defined for analyses: 18–21 years (younger bachelor's students), 22–34 years (the majority of master's students and a few older bachelor's students), and over 35 years (a small number of non-traditional students). By study cycle, 373 students were enrolled in bachelor's programmes and 47 in master's programmes. Year of study ranged from Year I to III (bachelor's) and Year I–II (master's); in the analysis, categories were: Year I bachelor's, Year II bachelor's, Year III bachelor's, and Year II master's (equivalently coded, because most master's students were in

the final year). Academic achievement was measured via grade point average: three groups were formed—students with a mean of 9–10 (high performance), a mean of 8 (good average performance), and below 7 (low performance). Approximately 20% of students were from rural backgrounds (n = 83), with ~80% from urban backgrounds (n = 337). Additionally, 88 students were married and 323 unmarried (including single and in non-formalised relationships).

Instruments and procedure. Data were collected using a comprehensive questionnaire assessing psychosocial adaptability across multiple domains. Standardised scales were used, including the MLO-AM (Multidimensional Locally-Oriented Adaptability Model)—with subscales for personal adaptive potential (internal capacity to cope with change), neuropsychic stability (emotional balance), communication capacities, and moral norms—and the AMS (Adaptability Measurement Scale), which measures satisfaction of fundamental needs at three levels: socio-communicative, ecosocial, and socioeconomic (labelled AMS1a, AMS1b, AMS1c), as well as satisfaction of communication needs in different contexts (family/friends—AMS2a, peers—AMS2b, teaching staff—AMS2c) and professional development needs (identification—AMS3a, training—AMS3b, time management—AMS3c). Students also completed a global adaptability/flexibility test, whose total score ("Adap") indicates the general level of adaptive flexibility.

The questionnaire included demographic questions and specific indicators: country, gender, age, year of study, academic status (overall grade average), background environment, and marital status. Targeted questions also addressed psychologically relevant habits/antecedents: "Do you have a clinical diagnosis of anxiety?" (Yes/No) and "Do you use essential oils (e.g., Lavender, Ylang-Ylang, Bergamot) to reduce your anxiety?" (Yes/No), as well as the general use of these aromas (Yes/No). Responses enabled group comparisons for each variable.

Analysis plan. Bivariate statistical tests appropriate to the nature of the independent variables were applied: independent-samples t tests (for dichotomous variables such as gender, environment, marital status, aroma use, etc.) and one-way ANOVA (for variables with more than two categories: country—2 groups, age—3 groups, year of study—4 groups, academic achievement—3 groups). For ANOVA, post hoc tests (Tukey HSD) were used to identify specific group differences. The significance threshold was $p < 0,05$. Analyses were conducted in SPSS 26, ensuring verification of assumptions (e.g., homogeneity of variances via Levene's test). Significant results are reported in the next section, highlighting the magnitude and direction of differences (which group shows higher/lower levels).

4. RESULTS

Overall, the analyses indicate a series of statistically significant differences in students' psychosocial adaptability as a function of the examined variables. Findings are presented below for each independent variable, with an emphasis on dimensions where notable differences were observed ($p < 0,05$) and brief notes for non-significant results.

Country (Romania vs. the Republic of Moldova). Significant differences were identified between Romanian students (n = 257) and Moldovan students (n = 163) on most adaptability indicators. Consistently, students from Romania obtained higher mean scores than those from the Republic of Moldova on: personal adaptive potential (M_RO = 1,89 vs. M_MD = 1,50, $p < 0,001$), neuropsychic stability (M_RO = 1,84 vs. M_MD = 1,50, $p < 0,001$), communication capacities (M_RO = 2,04 vs. M_MD = 1,89, $p < 0,001$), and a series of psychosocial needs: socio-communicative (M_RO = 2,47 vs. M_MD = 2,31, $p = 0,006$), ecosocial (M_RO = 2,43 vs. M_MD = 2,29, $p = 0,018$), and socioeconomic (M_RO = 2,31 vs. M_MD = 2,15, $p = 0,007$). Romanian students also reported better satisfaction of communication needs with relatives/friends (M_RO = 2,34 vs. M_MD = 2,18, $p = 0,025$) and

with peers (M_RO = 2,25 vs. M_MD = 2,04, p = 0,001), as well as with teaching staff (M_RO = 2,37 vs. M_MD = 2,04, p < 0,001). Similarly, regarding professional development, students from Romania had higher mean scores for professional identification (M_RO = 2,68 vs. M_MD = 2,39, p < 0,001), professional training (M_RO = 2,42 vs. M_MD = 2,15, p < 0,001), and personal time management (M_RO = 2,12 vs. M_MD = 1,87, p < 0,001). A notable exception concerns the global adaptability test: on this indicator, Moldovan students obtained a significantly higher score (M_MD = 2,21) than Romanian students (M_RO = 2,07, p = 0,006), suggesting slightly higher overall flexibility in the Republic of Moldova group. For moral norms, the very small mean difference (M_RO = 1,98 vs. M_MD = 1,96) did not reach statistical significance (p = 0,41), indicating similar values regarding internalisation of socio-moral norms across groups.

Gender (Male vs. Female). Gender-related differences were generally small and largely non-significant. On average, female students tended to have slightly higher scores than male students on most adaptive dimensions, but these differences did not reach statistical significance (e.g., personal adaptive potential: M_fem = 1,72 vs. M_masc = 1,81, p = 0,35; neuropsychic stability: M_fem = 1,69 vs. M_masc = 1,82, p = 0,10; communication capacities: M_fem = 1,96 vs. M_masc = 2,06, p = 0,051—difference at the threshold of significance). The only significant difference concerned socio-communicative needs: female students reported slightly better satisfaction of these needs (M_fem = 2,43) than male students (M_masc = 2,28, p = 0,044). This suggests that women may have somewhat higher social-communicative adaptability (e.g., satisfying communication and social relatedness needs more effectively); however, overall, gender does not appear to be a determining factor for global psychosocial adaptability (the total adaptability score is practically identical: M_fem = 2,13 vs. M_masc = 2,14, p = 0,85).

Age category. Analyses by age group reveal a strong and systematic effect of age on psychosocial adaptability. Older students (over 35 years, n = 113) presented, on average, the highest scores on almost all adaptive dimensions, followed by the intermediate age group (22–34 years, n = 119), whereas younger students (18–21 years, n = 144) had the lowest scores. This ascending trend with age was statistically confirmed for most indicators:

Personal adaptive potential: increases with age (M_18–21 = 1,45; M_22–34 = 1,71; M_>35 = 2,15), ANOVA F(2,373) = 41,91, p < 0,001. Differences are significant between all groups (students >35 years have significantly higher adaptive potential than those aged 18–21 and 22–34, p < 0,01).

Neuropsychic stability: increases with age (M_18–21 = 1,48; M_22–34 = 1,68; M_>35 = 2,08), F(2,373) = 34,24, p < 0,001. Students >35 years significantly exceed the other two groups (mean difference ~0,60 vs. 18–21 years, p < 0,001).

Communication capacities: highest in the >35 group (M = 2,11), significantly higher than in the other groups (M_18–21 ≈ 1,92, M_22–34 ≈ 1,93; p < 0,001). No differences emerged between the 18–21 and 22–34 groups (both with similar means ~1,92–1,93), suggesting that the additional life experience in the >35 category contributes to more developed communication skills.

Moral norms: a modest age effect was observed (F = 4,95, p = 0,008). Students >35 years tend towards slightly higher scores (M = 2,03) than those aged 18–21 (M = 1,93); the 22–34 group is intermediate (M = 1,97) and does not differ significantly from the others (the main difference is between >35 vs. 18–21, p = 0,005).

Satisfaction of socio-communicative needs: increases slightly with age (M_>35 = 2,53 vs. M_22–34 = 2,34 vs. M_18–21 = 2,36). ANOVA indicates a significant effect (F = 3,70, p = 0,026), with the notable difference being that students >35 years have a higher score than those aged 22–34 (p ≈ 0,04). The youngest group does not differ significantly from the others (M_18–21 is very close to M_22–34).

Ecosocial needs: improve with age (M_>35 = 2,52, compared with M_22–34 = 2,34 and M_18–21 = 2,29), F(2,373) = 5,49, p = 0,004. Students >35 years show significantly higher satisfaction of ecosocial needs than those aged 18–21 (p = 0,003), suggesting better social-ecological integration with maturation.

Socioeconomic needs: increase clearly after 18–21 years (M_18–21 = 2,08 vs. M_22–34 = 2,30 vs. M_>35 = 2,43), F = 11,87, p < 0,001. The 18–21 group has a significantly lower score than the other two groups (difference ~0,22–0,35, p < 0,01). Practically, younger students experience greater difficulties in meeting material and economic needs, probably due to lower financial resources or stability.

Communication with relatives/friends: does not vary significantly with age (p = 0,494); all groups have comparable means (~2,19–2,36).

Communication with peers: differs significantly (F = 7,09, p = 0,001). Students >35 years report the best communication with peers (M = 2,34), significantly higher than those aged 18–21 (M = 2,04, p = 0,001). The 22–34 group lies between the two (M = 2,16) and does not differ significantly from either—thus, the main difference is that older students (often master's students) communicate more effectively with peers than first-year students aged 18–21.

Communication with teaching staff: increases clearly with age (M_18–21 = 2,06; M_22–34 = 2,23; M_>35 = 2,55), F(2,373) = 19,20, p < 0,001. Students >35 years show significantly better communication with lecturers than younger groups (p < 0,001). Even students aged 22–34 tend to score higher than those aged 18–21, although their difference does not reach significance (p ≈ 0,09). This may reflect that mature students (often with professional responsibilities) interact more proactively and effectively with teaching staff.

Professional identification: increases with age (M_>35 = 2,79 vs. M_18–21 = 2,41; M_22–34 = 2,56), F = 11,33, p < 0,001. Students >35 years have a more consolidated professional identity than those aged 18–21 (p < 0,001) and slightly above those aged 22–34 (p = 0,02). Thus, vocational clarity increases markedly with age.

Professional training (skills development): improves with age (M_>35 = 2,60 vs. M_18–21 = 2,14), F = 19,99, p < 0,001. Students >35 years evaluate satisfaction of training needs significantly more positively than both younger groups (p < 0,001). The 18–21 and 22–34 groups do not differ (both younger groups still lack aspects of professional development that mature students have achieved).

Personal time management: also better in the >35 group (M = 2,19) compared with the 18–21 group (M = 1,88), F = 6,70, p = 0,001. The significant difference is between >35 and 18–21 (p = 0,001). Older students appear to manage time more efficiently, likely due to cumulative personal and professional experience.

Global adaptability (flexibility): interestingly, here the 18–21 group has a slightly higher score (M = 2,19) compared with students >35 years (M = 2,04), with a significant effect F(2,373) = 3,16, p = 0,044. Post hoc tests indicate a significant difference only between the 18–21 and >35 groups (p ≈ 0,03). In other words, although mature students lead on most specific adaptation dimensions, very young students show slightly higher general flexibility—possibly due to the enthusiasm and openness to novelty characteristic of early adulthood, whereas older students may become more rigid in their routines.

Study cycle (Bachelor's vs. Master's). Master's status entails clear differences in adaptability compared with being a bachelor's student. Master's students (n = 47) obtain significantly higher scores on most variables than bachelor's students (n = 373). Specifically, master's students are characterised by: higher personal adaptive potential (M_master = 2,21 vs. M_licență = 1,68, p < 0,001), better emotional stability (M_master = 2,06 vs. M_licență = 1,66, p < 0,001), and more developed communication capacities (M_master = 2,15 vs. M_licență = 1,96, p = 0,001). They also report more effective interaction with teaching staff (communication needs satisfied, M_master = 2,55 vs. M_licență = 2,20, p = 0,001). These

differences suggest that students at an advanced level of study become more psychosocially adaptable, likely due to accumulated academic experience and transition towards a professional profile. Other aspects do not differ significantly between the two cycles: for example, moral norms are very similar (M_master = 2,04 vs. M_licență = 1,97, p = 0,061—non-significant). Similarly, satisfaction of ecosocial or socioeconomic needs shows no notable variation between bachelor's and master's (all p > 0,1). Interestingly, general flexibility measured by the adaptability test is, on average, higher among bachelor's students (M = 2,16) than among master's students (M = 1,87), a very clear difference (p < 0,001). Thus, although master's students have advantages on specific dimensions (professional orientation, stability), bachelor's students show higher overall adaptive flexibility—possibly explained by their younger age and greater malleability in the face of change.

Year of study. Year-based results confirm the trends observed in the bachelor's–master's comparison, highlighting the effect of educational level on adaptation. ANOVA reveals significant differences (most p < 0,01) on almost all adaptive dimensions across groups from different years of study (Years I, II, III bachelor's and Year II master's). Year II master's students (coinciding with the final year) show the highest adaptive scores, whereas Year I bachelor's students typically show the lowest levels, with Years II–III bachelor's students in an intermediate position. This pattern is illustrated by the following differences:

Adaptive potential: increases progressively with advancement in year (M_an I = 1,63; M_an III = 1,71; M_an II Master = 2,21), p < 0,001. Master's students (Year II M) clearly exceed all bachelor's groups (difference ~0,5–0,6 vs. Year I, p < 0,001). No notable differences appear between Years I–III bachelor's on this indicator.

Neuropsychic stability: significantly higher among master's students (M_an II M = 2,06) than among bachelor's students (M_an I = 1,64, M_an III = 1,70; p < 0,001). Year I students are significantly below Year II master's students (p < 0,001).

Communication capacities: Year II M students have a higher mean (2,15) vs. bachelor's students (~1,91–1,97), p < 0,01. The notable difference is between master's students and Years I/II bachelor's (p = 0,012 vs. Year I; p = 0,021 vs. Year II); Year III bachelor's does not differ much from master's (1,96 vs. 2,15, p = 0,124).

Moral norms: no consistent significant differences emerge between years (p = 0,311). Mean values fluctuate narrowly (approximately 1,93–2,05) without a clear pattern.

Socio-communicative needs:* Year II master's students report the best satisfaction (M = 2,59), significantly above Year I (M = 2,37, p = 0,036). Bachelor's-year groups do not differ substantially from each other (~2,34–2,41).

Ecosocial needs:* increase gradually (M_an I = 2,29; M_an III = 2,38; M_an II M = 2,52), p = 0,004. Master's students have a significantly higher level than first-year students (difference ~0,23, p = 0,004).

Socioeconomic needs:* overall difference p < 0,001. Year II M students have the highest score (2,45), whereas Year I bachelor's students have the lowest (2,08). Post hoc tests show that Year I is significantly below Year II bachelor's and Year II master's (p < 0,01).

Communication with relatives/friends: not significantly influenced by year (p = 0,494).

Communication with peers: F(3,416) = 2,22, p = 0,085 (trend). Master's students (Year II M, M = 2,34) communicate somewhat better with peers than earlier-year students (e.g., M_an I = 2,08), but the difference is at the threshold of statistical significance.

Communication with teaching staff: F(3,416) = 5,18, p = 0,002. Year II M students demonstrate significantly better communication with lecturers (M = 2,51) than bachelor's students (M_an I = 2,19, M_an III = 2,17; p = 0,003 vs. Year III and p = 0,005 vs. Year I). Year II bachelor's (M = 2,41) also scores above Years I/III (possibly indicating gradual adaptation across the degree programme).

Professional identification: F(3,416) = 1,72, p = 0,162 (non-significant). Nevertheless, the mean increases from Year I (2,41) to Year II M (2,62). An improvement in the consolidation of professional goals towards the end of studies can be observed, but within-group variability means that the difference is not statistically robust.

Professional training: F(3,416) = 1,57, p = 0,195; unclear upward trend—Year II M (2,56) vs. Year I (2,14). Although ANOVA did not reach $p < 0,05$, the trend nonetheless indicates that senior students attribute greater importance to continuous professional development than students at the beginning.

Time management: F(3,416) = 1,23, p = 0,297 (non-significant difference). Year II M nonetheless has the highest mean (2,11 vs. ~1,96 in Year I). Master's students appear to manage time somewhat more effectively, but the difference is not statistically pronounced.

In conclusion, year of study confirms an academic cohort effect: students at the end of their academic trajectory (including master's students) are better psychosocially adapted than those at the beginning, particularly on parameters such as autonomy and relationships with lecturers—areas that develop with academic experience. The only notable reversal remains in general flexibility, where first-year students have values comparable to those of older peers (e.g., Adap ~2,13 constant across years).

Academic achievement. Students' academic performance (measured by grade averages) correlates with psychosocial adaptability, although the relationship is not linear across all components. Comparative analysis of three groups—means of 9–10 (high performance, n = 130), mean of 8 (moderate performance, n = 109), and below 7 (low performance, n = 85)—indicates significant differences for approximately half of the assessed adaptation dimensions. Students with high academic performance (mean 9–10) have higher scores on: personal adaptive potential ($F(2,321) = 14,82$, $p < 0,001$; e.g., mean difference ~0,49 vs. the "below 7" group and ~0,22 vs. the "8" group), neuropsychic stability ($p < 0,001$; top students showing greater emotional control than those with arrears, difference ~0,52), and also on satisfaction of socioeconomic needs (mean 9–10: ~2,32 vs. below 7: ~2,21, although the ANOVA effect is not very strong, p = 0,149) and communication with faculty peers (top students appear more collegially integrated, p = 0,113, although the difference is not significant). An interesting result emerges for moral norms: students with average results (grade 8) tend to have slightly higher morality scores ($M \approx 2,04$) than those with maximum grades ($M \approx 1,93$) or very low grades ($M \approx 1,94$), ANOVA $F(2,321) = 7,32$, p = 0,001. The main difference is that the grade-8 group scores significantly above the below-7 group ($p < 0,01$) and above the top group ($p < 0,05$), suggesting a possible regression-to-the-mean effect: very high- or very low-performing students similarly tend not to overvalue moral conformism, whereas those with commendable (but not excellent) performance score somewhat higher on this dimension.

Regarding students with weak academic results (mean below 7), they stand out negatively through lower adaptability on several components. They have the lowest scores on adaptive potential and emotional stability (differences noted above), indicating difficulties coping with academic stress. They also report significantly the poorest communication with teaching staff ($M\_sub7 \approx 2,10$ vs. $M\_9–10 \approx 2,51$, $p < 0,001$)—likely due to lower academic engagement—and the lowest involvement in professional development (professional training need scores $M\_sub7 \approx 2,14$ vs. $M\_9–10 \approx 2,33$, $p < 0,01$). In other words, academically underperforming students appear less integrated and less concerned with the vocational side of education. It should nevertheless be noted that for general flexibility (the total adaptability test), no significant differences emerge among the three academic achievement categories ($p > 0,5$); thus, general adaptation abilities do not depend directly on grades.

Overall, the hypothesis regarding a positive association between academic performance and adaptability is partially confirmed. Academically elite students excel on many adaptive

domains (emotional balance, adaptive self-efficacy, etc.), but in some areas students with average or even low performance may show comparable or better values (e.g., moral norms or flexibility). The specific context (pressure for maximum grades vs. moderate relaxation) may influence these results.

Background environment (Urban vs. Rural). A significant effect of background environment on adaptability is observed, with students from urban environments showing, on average, higher scores than students from rural environments on several indicators. Differences are pronounced for: personal adaptive potential (M_urban = 1,78 vs. M_rural = 1,57, p = 0,009), neuropsychic stability (M_urban = 1,76 vs. M_rural = 1,52, p = 0,002), and communication capacities (M_urban = 2,00 vs. M_rural = 1,90, p = 0,038). These findings indicate that students raised in larger cities tend to be more confident in their adaptive abilities and to manage psychosocial stress better than peers from villages or small towns. In addition, satisfaction of ecosocial needs (e.g., community integration and access to resources) is better among urban students (M = 2,41 vs. 2,24, p = 0,016), probably due to the broader opportunities offered by the urban environment (services, educational infrastructure, diverse social networks). Conversely, dimensions such as moral norms, socio-communicative needs, or relationships with relatives/friends do not show statistical differences by urban/rural status (p > 0,3–0,5); values are similar, suggesting that geographical origins do not influence adherence to moral principles or maintenance of close ties. Global adaptability does not differ significantly between the two categories (p = 0,63), with rural students having a practically identical mean score (2,14) to urban students (2,12). Nonetheless, the overall profile indicates an adaptive advantage for students shaped in urban environments, especially in terms of personal autonomy and emotional stability. It can be speculated that the more complex and unpredictable urban life experience provides earlier opportunities to practise adaptability.

Marital status (Unmarried vs. Married). One of the most robust factors associated with adaptability proved to be marital status. Differences between married students (n = 88) and unmarried students (n = 323) systematically favour married students across almost all domains. Married students have significantly higher mean scores than unmarried students for: personal adaptive potential (M_căs = 2,18 vs. M_nec = 1,62, p < 0,001), neuropsychic stability (M_căs = 2,13 vs. M_nec = 1,60, p < 0,001), communication capacities (M_căs = 2,08 vs. M_nec = 1,95, p = 0,004), and even moral norms (M_căs = 2,05 vs. M_nec = 1,96, p = 0,004). Married students also report higher satisfaction of all need types: socio-communicative (M_căs = 2,59 vs. M_nec = 2,36, p = 0,001), ecosocial (M_căs = 2,52 vs. 2,33, p < 0,001), socioeconomic (M_căs = 2,45 vs. 2,19, p < 0,001). They communicate better with family/friends (M_căs = 2,48 vs. 2,23, p = 0,003), peers (M_căs = 2,38 vs. 2,12, p = 0,001), and teaching staff (M_căs = 2,51 vs. 2,17, p < 0,001). Moreover, they endorse a clearer professional identity (M_căs = 2,77 vs. 2,52, p = 0,001) and a stronger need for professional upskilling (M_căs = 2,56 vs. 2,25, p < 0,001), while managing time more efficiently (M_căs = 2,24 vs. 1,97, p = 0,001). In practical terms, being married appears associated with greater maturity and personal stability, which is reflected in more extensive psychosocial adaptability. It may be assumed that family responsibilities and emotional support from a partner contribute to the development of these adaptive abilities. Notably, no indicator was weaker among married students than among unmarried students—including the global adaptability test, where the two groups had practically identical means (M = 2,13 for both, p = 0,895). Thus, marital status appears to be a positive predictor of adaptation: married students constitute the most adapted group, likely due to additional social and emotional capital available in their personal lives.

Use of essential oils (Lavender, Bergamot, Ylang-Ylang)—general use. The study investigated whether students who reported using aromatherapy (n = 167) differ from those who do not use such aromas at all (n = 253) with respect to adaptability. Results show significant differences only on certain dimensions. On average, essential oil users have higher

scores for satisfaction of socio-communicative needs (M_Da = 2,55 vs. M_Nu = 2,31, p < 0,001), ecosocial needs (M_Da = 2,51 vs. 2,29, p < 0,001), and socioeconomic needs (M_Da = 2,36 vs. 2,17, p = 0,002). They also interact significantly better with teaching staff (M_Da = 2,35 vs. M_Nu = 2,17, p = 0,006), possibly reflecting a more proactive attitude and self-control (potentially related to managing stress through remedies such as aromas). Additionally, aroma users score higher on clarifying professional identity (M_Da = 2,69 vs. 2,49, p = 0,002) and orientation towards training (M_Da = 2,43 vs. 2,24, p = 0,003), suggesting a student profile concerned with personal development and well-being. Conversely, no significant differences appear for adaptive potential, emotional stability, or general communication capacities (p = 0,05–0,13; e.g., MLO-AM PPA ~1,75 in both groups, p = 0,057). Global adaptability also does not differ (Adap ~2,12 for both subgroups, p = 0,63).

These findings indicate a weak beneficial association between essential oil use (as a relaxation or self-care practice) and certain aspects of adaptation—particularly the social dimension and attitudes towards studies. Students who resort to such wellness methods may, in general, be more aware of their psychosocial needs and more active in meeting them. However, aromatherapy in itself does not appear sufficient to influence internal adaptive capacity or emotional balance, as no differences were found on those parameters.

Prior diagnosis of anxiety. As expected, a clinical diagnosis of anxiety in students' history has a negative impact on their psychosocial adaptability. Comparing students who reported a diagnosis of anxiety (n = 63) with those without such a diagnosis (n = 357) shows significant differences across multiple domains, invariably in the direction of lower scores for the anxiety group. Students with diagnosed anxiety show reduced personal adaptive potential (M_DA = 1,49) compared with those without anxiety (M_NU = 1,78, p = 0,001), indicating lower confidence in their ability to cope with change. They also have lower neuropsychic stability (M_DA = 1,46 vs. M_NU = 1,75, p = 0,001), reflecting higher levels of emotional instability and vulnerability to stress. Communication capacities are also slightly affected: the anxious group's mean is lower (1,87 vs. 2,00, p = 0,013), possibly suggesting greater social withdrawal or expression difficulties. In the social domain, students with anxiety appear less integrated; for example, satisfaction of ecosocial needs is significantly lower (M = 2,19) than among peers without anxiety (M = 2,41, p = 0,005). Similarly, they lag behind in professional identification (M_DA = 2,38 vs. M_NU = 2,60, p = 0,013) and professional training (M_DA = 2,16 vs. 2,34, p = 0,036), possibly due to anxiety's impact on motivation and career-related concentration. It is noteworthy that socio-communicative needs, moral norms, and relationships with friends do not differ significantly (those with anxiety appear to benefit from close social support networks to a similar extent as others). Global adaptability has practically identical means for the two groups (2,13 vs. 2,13, p = 0,98), suggesting that although anxiety undermines certain specific aspects (confidence, emotional calm), affected students often mobilise general adaptive mechanisms comparable to those of others (possibly through conscious effort or external support). Nevertheless, the adaptive profile of the anxious student appears fragile and indicates the need for additional support to strengthen resilience (to stress), social skills, and academic/professional engagement.

Use of aromas to reduce anxiety. Among students, 108 (approximately 26%) report using aromas/essential oils specifically when feeling anxious, whereas 312 (74%) do not. It was examined whether this coping practice (anti-stress aromatherapy) is associated with adaptive differences. Findings show several adaptive advantages among students who use aromas for anxiety, although many dimensions remain similar between groups. Specifically, anti-anxiety aroma users show better satisfaction of socio-communicative needs (M_DA = 2,55 vs. M_NU = 2,35, p = 0,003), indicating an ability to maintain social relationships and communication even under anxious states. They also perform slightly better on ecosocial needs (M = 2,48 vs. 2,34, p = 0,030), suggesting better social-ecological integration, possibly due to

actively addressing stress through calming methods. Reports also indicate improved communication with teaching staff among students who use aromas (M = 2,39 vs. 2,20, p = 0,009), perhaps because aromatherapy helps them manage evaluative anxiety, allowing more relaxed interaction with lecturers. Another noted benefit concerns professional training: users appear more involved in competence development (M = 2,44 vs. 2,26, p = 0,010). By contrast, no significant differences were recorded for adaptive potential, emotional stability, or basic communication skills—thus aromatherapy does not directly influence internal adaptive capacity. Likewise, neither satisfaction of communication needs with friends nor general adaptability (Adap ~2,12 in both groups, p = 0,63) differs as a function of aroma use. It can be concluded that coping through aromas has limited but real effectiveness: students who adopt it appear slightly better adapted socially and academically under stress than those who do not. Aromatherapy may function as an indicator of an active, self-control-oriented coping style, which is reflected beneficially in certain adaptive behaviours (socialising, professional proactivity).

5. CONCLUSIONS

This study analysed students' psychosocial adaptability in a multidimensional manner, tracking its variation as a function of socio-cultural, demographic, academic, and personal factors. Overall, the objective was achieved: the results delineate differentiated adaptation profiles, indicating that integration into the university environment is not a uniform attribute, but rather the outcome of interactions between individual resources, contextual conditions, and accumulated experience.

From a socio-cultural perspective, country of origin delineates consistent differences. Students from Romania generally recorded higher levels on most specific adaptability dimensions (adaptive potential, stability, communication, and satisfaction of certain socio-educational needs), suggesting an advantage associated with access to different resources and opportunities. However, overall flexibility appears slightly higher among students from the Republic of Moldova. This dissociation indicates that more modest levels on certain subscales can coexist with good global capacity to adjust to change, possibly supported by compensatory strategies and greater tolerance of uncertainty.

Gender does not emerge as a major predictor. Differences between women and men are small and largely non-significant, with a modest advantage for female students in satisfaction of socio-communicative needs. The implication is pragmatic: support interventions should be designed on the basis of actual indicators of functioning and vulnerability (stress, integration, performance), rather than assumptions related to gender.

Age and life experience have a robust impact on adaptation. Mature students display higher specific adaptability: better emotional stability, more effective communication, and more solid academic and social integration. In parallel, very young students tend to show slightly higher general flexibility. This suggests two complementary components of adaptation: malleability and openness to novelty, more visible at the start of adulthood, versus specific competence, consolidated through experience and practice.

Educational trajectory (cycle and year of study) confirms the same logic. Master's students and students in final years generally obtain higher scores on applied adaptability dimensions, reflecting progressive accommodation to university norms, increased autonomy, and the development of functional relationships with teaching staff. At the same time, general flexibility may remain higher at bachelor's level, highlighting that academic seniority strengthens specific competencies without automatically guaranteeing flexibility in the face of change.

Academic achievement is, overall, associated with better adaptability, but the relationship is not strictly linear. High-performing students tend to be more emotionally balanced and more confident, whereas low performance functions as a risk indicator associated with vulnerabilities (instability, weaker institutional integration, less clear professional orientation). At the same time, certain dimensions may advantage medium-performing groups, suggesting that the pressure of excellence can entail costs in time, energy, and socio-relational availability.

Background environment differentiates adaptation in favour of urban students, particularly through adaptive potential and neuropsychic stability, likely due to exposure to more varied educational and social opportunities. Conversely, the primary support networks of rural students may function as a compensatory resource. Marital status stands out as a strong predictor: married students are, on average, the best adapted, probably through stability, emotional support, and structuring of daily life; for universities, this underscores the importance of building alternative sources of support for vulnerable unmarried students.

Aromatherapy-related variables indicate limited positive effects, mainly in the socio-communicative domain and academic engagement, suggesting a solution-focused coping style but without a major impact on intrinsic adaptive resources. In contrast, a prior diagnosis of anxiety is associated with a more fragile adaptive profile on specific dimensions (confidence, emotional resilience, integration), confirming the need for accessible psychological services and targeted interventions. Using aromas to reduce anxiety appears to yield modest benefits, particularly by maintaining socio-academic functioning (social contact and communication with teaching staff), even if it does not eliminate intrinsic differences associated with anxiety.

Thus, students' psychosocial adaptability is influenced primarily by maturity, academic seniority, social capital, and emotional health. The results recommend a differentiated institutional approach, with early identification of vulnerable students and implementation of targeted interventions (mentoring, counselling, tutoring, and coping programmes). Priority should be given to interventions for first-year students, students with weak results, and those with anxiety, in order to prevent adaptation difficulties, performance decline, and dropout.

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