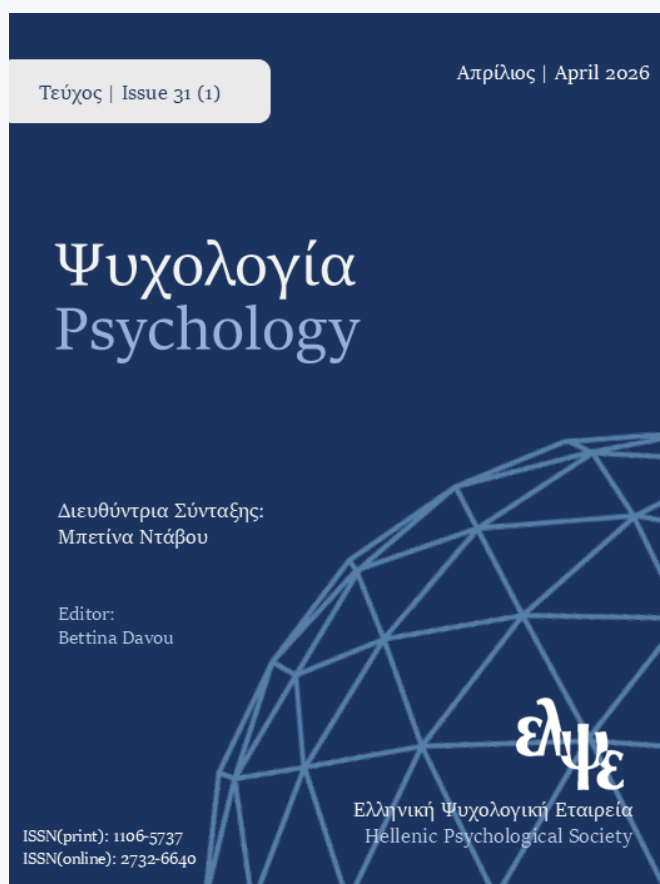


Psychology: the Journal of the Hellenic Psychological Society

Vol 31, No 1 (2026)

Special Issue: Counseling and Positive Psychology in dialogue: Encounters, narratives, challenges, a tribute to Professor Anastassios Stalikas



Sense of belonging among university students: Relations with sexual harassment and negative emotional states

Thanos Touloupis, Christina Athanasiades, Dimitrios Stamovlasis

doi: [10.12681/psy_hps.45295](https://doi.org/10.12681/psy_hps.45295)

Copyright © 2026, Thanos Touloupis, Christina Athanasiades, Dimitrios Stamovlasis



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0](https://creativecommons.org/licenses/by-sa/4.0/).

To cite this article:

Touloupis, T., Athanasiades, C., & Stamovlasis, D. (2026). Sense of belonging among university students: Relations with sexual harassment and negative emotional states. *Psychology: The Journal of the Hellenic Psychological Society*, 31(1), 78–93. https://doi.org/10.12681/psy_hps.45295



ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

Sense of belonging among university students: Relations with sexual harassment and negative emotional states

Thanos Touloupis¹, Christina Athanasiades², Dimitrios Stamovlasis³¹ Department of Primary Education, University of the Aegean² Department of Psychology, Aristotle University of Thessaloniki³ Department of Philosophy and Education, Aristotle University of Thessaloniki

KEYWORDS	ABSTRACT
<p>Sense of belonging University students Sexual harassment Stress Anxiety Depression</p>	<p>The present study is part of a broader research project regarding students' reported experiences of sexual harassment in the context of academic life, funded by the Special Account for Research Funds of the Aristotle University of Thessaloniki (AUTH), under the auspices of the Gender Equality Committee and the Center for Social Research and Decision Making of the AUTH. More particularly, this study aimed to investigate the levels of students' sense of belonging to their university community and whether this sense relates to their reported experiences and perceptions of sexual harassment and negative emotional states, such as stress, anxiety, and depression. Overall, 2,134 students (70.5% women), anonymously and voluntarily completed an electronic questionnaire, which included self-reported scales related to the variables involved (sense of belonging, sexual harassment, negative emotional states). According to the results of the Latent Class Analysis (LCA), the students, without gender-based statistically significant differences, were categorized into four clusters/groups: the "non-integrated" (50.15%), the "partially non-integrated" (27.39%), the "partially integrated" (13.48%) and the "integrated" (8.98%). Furthermore, it was found that the "integrated" students, who presented a higher sense of belonging, were related to a much lower probability of experiencing sexual harassment (and its perceived psychoeducational consequences) as well as negative emotional states. Despite the fact that the study was conducted after the end of the quarantine due to the COVID-19 pandemic, the findings highlight the relations between students' sense of belonging and their psychosocial adaptation in the university community, implying at the same time the necessity of implementing appropriate psychoeducational interventions.</p>
<p>CORRESPONDENCE</p> <p>Thanos Touloupis Department of Primary Education, University of the Aegean Dimokratias 1, Building "7th March", Rhodes 85132, Greece t.touloupis@aegean.gr</p>	

The sense of belonging concerns the subjective sense of a strong connection to social groups, physical spaces, and individual or collective experiences (Allen et al., 2021). According to theory, it seems that the sense of belonging depends on four groups of factors, which interact dynamically with each other: (a) the set of abilities that the individual must develop in order to succeed in connecting with others, (b) the set of opportunities that he/she must have at his/her disposal in order to be able to connect, (c) the motivations that he/she must have (the need or willingness to connect), and finally (d) the individuals' perceptions, namely the subjective, personal feeling and perception of an individual in relation to his/her experiences (Allen et al., 2021; Gopalan & Brady, 2019). Furthermore, the sense of belonging is considered a fundamental human need, which predicts a variety of mental, physical, social, economic, and behavioral outcomes (Allen et al., 2021; Gopalan & Brady, 2019).

A significant number of studies have examined the sense of belonging among higher education students, namely the extent of the students' perceived appreciation, inclusion and acceptance as members of the university community (Masika & Jones, 2016; Maunder, 2018). In other words, students' sense of belonging reflects their feelings of connectedness and integration with their university environment (Gillen-O'Neel, 2021; Maunder, 2018; Soria & Stubblefield, 2015). Based on Self-Determination Theory (Ryan & Deci, 2000), when the academic environment facilitates students' sense of belonging, the latter are more positively predisposed to internalize academic values, they feel positive about their academic context and, subsequently, they engage in behaviors respectful of those values. Also, students are considered emerging adults (Arnett, 2007), who transit from adolescence to adulthood experiencing different challenges. Indicatively, they often have to settle in a new city, live on their own, socialize with new fellow students of different cultural backgrounds, discover their sexual identity, and meet academic obligations. Therefore, students' sense of belonging could contribute to their effective adjustment to their academic environment.

However, most of the relevant studies investigate either the psycho-educational predictors or the outcomes of students' sense of belonging (e.g., Fong et al., 2024; Gillen-O'Neel, 2021; Kelly et al., 2024; Kim & Irwin, 2013; Murray et al., 2022; Nuñez, 2009; Pedler et al., 2022; Strayhorn, 2018). A very limited number of studies refer to either quantitative or qualitative information about the extent of students' perceived sense of belonging to their university community. These studies, on the one hand, highlight that students have a moderate sense of belonging to their university environment (e.g., Gopalan & Brady, 2020), while, on the other hand, they conclude that students report a high sense of belonging (e.g., Kelly & Mulrooney, 2019). Although the above studies differ in many methodological points, they imply that different circumstances in different higher educational institutions may lead to the variation of students' sense of belonging to their university community. Furthermore, these limited findings underline that this issue is significantly under-investigated.

Moreover, related studies attempted to investigate gender-based differences regarding students' sense of belonging. Most studies concluded that female students tend to have a lower sense of belonging to their university environment and courses (Krause-Levy et al., 2021; Mooney & Becker, 2020). Nevertheless, other studies concluded either that male students experience less psychological connection to their university (Lee et al., 2002), or that university students' sense of belonging is not statistically significant differentiated based on their gender (Runa et al., 2023). Therefore, the above findings are conflicted to some extent, implying that future studies are needed to further outline whether female or male students tend to experience less psychologically integrated into their university community.

Finally, while numerous studies concluded that students' sense of belonging is associated with positive academic outcomes, such as motivation, academic self-efficacy, academic engagement and performance (e.g., Fong et al., 2024; Gillen-O'Neel, 2021; Kelly et al., 2024; Kim & Irwin, 2013; Pedler et al., 2022; Strayhorn, 2018), no study examined the relationships between students' sense of belonging, on the one hand, and their specific negative experiences, such as sexual harassment, as well as their negative emotional states, such as stress, anxiety and depression, on the other hand.

Sexual harassment refers to "any form of unwanted verbal, non-verbal, or physical behavior of a sexual nature, which has the purpose or results in violating the dignity of an individual, in particular when it creates a threatening, hostile, degrading, humiliating, or offensive environment" (Hoel & Vartia, 2018, p. 13). The abovementioned behaviors may occur in both the physical and/or the online environment and may influence negatively both those who directly experience them as well as those who witness them (Johnson et al., 2018; Kasdagli & Mourtzaki, 2020). According to the authors knowledge, only one study has been identified



investigating the relationship between university students' perceived connectedness (a concept similar to the sense of belonging) and their sexual harassment and assault (Perez-Trujillo et al., 2019). Moreover, two other studies conducted on adolescents mention that school students' sense of belonging is negatively correlated with bullying victimization (Cheng et al., 2020) and gender-based harassment (Tam & Brown, 2020).

Apart from sexual harassment, students' feelings of stress and depression also seem to be correlated with their perceived sense of belonging to their university community. Stress concerns "a relationship with the environment that the person appraises as significant for his or her well-being, in which the demands tax or exceed available coping resources" (Lazarus et al., 1984, p. 63), while depressive symptoms include irritability, pessimism, social dysfunction, feelings of being punished, frequent crying, talking less, and perceiving others as unfriendly (Beck et al., 1996; Folkman & Lazarus, 1986). According to a limited number of studies, university students who report that they feel belonged to their university environment tend to feel less stressed (Civitci, 2015; Grobecker, 2016; Jaiswal et al., 2024) and manifest minimal depressive symptoms (Backhaus et al., 2021; Dutcher et al., 2022; Peoples et al., 2024).

Overall, it may be inferred that university students' high sense of belonging may correlate not only positively with positive academic results, but also negatively with students' difficulties in their adjustment and well-being in the academic context. However, this issue needs further investigation within the context of international and especially Greek literature, where the present study was conducted. Consequently, the aim of the present study was to investigate the levels of university students' sense of belonging to their academic environment, examining at the same time the relationships between this sense, on the one hand, and their reported experiences and perceptions of sexual harassment as well as their negative emotional states, such as stress, anxiety and depression, on the other hand. In specific, the study investigated:

- (1) The differentiated levels of sense of belonging among students
- (2) Differences in students' sense of belonging based on their gender
- (3) The association between students' sense of belonging and sexual harassment (experiences, perceptions)
- (4) The association between students' sense of belonging and their mentioned negative emotional states (stress, anxiety, depression)

According to the available literature, the following were expected:

- (1) Differentiated levels (profiles) regarding students' sense of belonging, since the variable fluctuates depending on context and circumstances (Hypothesis 1; Gopalan & Brady, 2020; Kelly & Mulrooney, 2019)
- (2) Sense of belonging to the university community will be lower for female students (Hypotheses 2; Krause-Levy et al., 2021; Mooney & Becker, 2020)
- (3) A negative association between students' sense of belonging and sexual harassment (experiences, perceptions) (Hypothesis 3; Perez-Trujillo et al., 2019)
- (4) A negative association between students' sense of belonging and their mentioned negative emotional states (stress, anxiety and depression) (Hypothesis 4; Jaiswal et al., 2024; Peoples et al., 2024)

Method

Participants

The sample of the present study included 2134 students from the Aristotle University of Thessaloniki (AUTH), which is one of the largest Greek Higher Educational Institutions (AUTH, n.d.). Regarding the demographic/personal and educational characteristics of the majority of the participants, 70.5% were identified as women (men: 27%, other: 2.5%), 78.44% were between 18-24 years old (25-29 years old:

10.97%, 29-39 years old: 6.42%, over 40 years old: 4.13%) and 81% attended undergraduate studies (postgraduate students: 19%). Most of the participants were students of Natural Sciences (29.8%), while the rest of them were distributed to the following Schools: Humanities (25.3%), Social Sciences (20.5%), Technological Sciences (13.5%), Medicine-Health Sciences (10.9%). Finally, 5.6% of the sample stated that they had a special educational need (e.g., learning / motor disability, chronic illness).

Measures

The self-reported electronic questionnaire of the present study included initial questions regarding students' demographic/educational characteristics, as well as the following main parts:

Sense of belonging to university community. Students' sense of belonging to university community was investigated through a subscale of the "Campus Climate Survey on Sexual Assault and Misconduct" (David Cantor et al., 2020). The subscale was translated with the back-and-forth translation method by a native English speaker. The subscale "sense of belonging" included five questions (e.g., "To what extent do you feel like a member of the university community?", "To what extent do you feel comfortable seeking advice from academic staff?") regarding students' sense of social cohesion and emotional safety in their university environment. The questions are answered on a five-point Likert scale (from 1 = *Not at all* to 5 = *Very much*). According to David Cantor et al. (2020), the results of the validity of conceptual construct (using the principal component analysis) show that the the subscale of sense of belonging constitutes a unidimensional construct. The internal consistency coefficient of the subscale in the present study was $\alpha = .86$. The total score of the dimension was calculated as the sum of the corresponding item scores.

Sexual harassment. Students' experiences/perceptions of sexual harassment were examined through the "Campus Climate Survey on Sexual Assault and Misconduct" (David Cantor et al., 2020), which -as mentioned before- it was translated to Greek. Specifically, the subscales regarding students' involvement in sexual harassment incidents (6 questions; e.g., "During your studies at university, did you ever experience harassment through sexual comments?") and the perceived consequences (4 questions; e.g., "Did sexual harassment affect your academic performance?"), were used. The questions were answered on a dichotomous response system (1 = *Yes*, 2 = *No*). The items of sexual harassment incidents measure the frequency of various incidents reported while the total score was calculated as the sum of the corresponding item scores. According to David Cantor et al. (2020), the results of the validity of conceptual construct (using the principal component analysis) show that the the subscale of sexual harassment incidents constitutes a unidimensional construct. The internal consistency coefficient of this subscale in the present study was $\alpha = .77$. Accordingly, the results of the validity of conceptual construct (using the principal component analysis) show that the the subscale of perceived consequences constitutes a unidimensional construct (David Cantor et al., 2020). The internal consistency coefficient of this subscale in the present study was $\alpha = .84$. The total score of the dimension was calculated as the sum of the corresponding item scores.

Stress anxiety and depression. Students' stress, anxiety and depression were examined through the Greek-weighted version (Pezirkianidis et al., 2018) of the "Depression, Anxiety, Stress Scale 21" (DASS-21; Lovibond & Lovibond, 1995). The Greek version of the scale has been weighted in a wide age sample (18-65 years old), and the validity results (using the confirmatory factor analysis) show that the the scale reflects three dimensions (depression, anxiety, stress) (Pezirkianidis et al., 2018) with internal consistency coefficients in the present study (depression: $\alpha = .85$, anxiety: $\alpha = .84$, stress: $\alpha = .84$). The scale examines the extent to which specific emotions have been experienced by a non-clinical population over the past period of time. It



should also be noted that this scale is not a diagnostic tool for mental illness (such as depression, for example), but a self-report scale in relation to certain emotional states and behaviors. The scale includes 21 statements which measures the emotional states of depression (e.g., “I couldn’t seem to experience any positive feeling at all”), anxiety (e.g., “I found myself in situations that made me so anxious I was most relieved when they ended”) and stress (e.g., “I found it difficult to relax”). The statements are answered on a four-point Likert scale (from 1 = *Did not apply to me at all* to 4 = *Applied to me very much or most of the time*).

Procedure

Upon approval of the study from the Research Ethics Committee of the ATh (Protocol No.: 37/22-06-2021), the electronic questionnaire was constructed through an online platform (<https://www.limesurvey.org/solutions/universities>). The students’ IP addresses were protected and could not be identified, ensuring the confidentiality of their responses to the online survey. A personal message including the link with the questionnaire was forwarded to all students of the ATh. The questionnaire included a consent form with all the necessary information about the nature of the study and identity of the researchers, as well as a contact email in case students wanted to ask for clarifications or felt discomfort during the completion of the questionnaire. It should be mentioned that no student sent an email for clarifications or about discomfort. Upon students’ agreement with the consent form, they proceeded to the completion of the self-reported scales. Data was collected from November 2021 to February 2022 securing all the required ethical rules about confidentiality and anonymity.

Results

Data analysis

Latent Class Analysis (LCA) was implemented to test our research hypotheses. The contribution of this statistical approach lies in the fact that it offers an improved understanding of the dynamics within student groups, as well as an increased accuracy in predicting future behavior based on previous behavior within groups (Vermunt & Magidson, 2004; Weller et al., 2020). More specifically, LCA is a psychometric method that aims to identify clusters or latent classes (LC), that is, groups of students, which share similar response patterns. These similar sets of responses are supposed to originate from the same latent variable, which is the common causal-cause of the observable patterns (Clogg, 1995). When the input/observable variables are measured at the interval scale, the clusters or latent class are named latent profiles (LPA). LCA/LPA is a model-based cluster analysis procedure, which implements the conditional probabilities (CP) and Bayesian statistics for assigning class-memberships to the participants. The statistical procedure provides a number of cluster solutions with the corresponding indicators, such as the number of parameters, likelihood ratio statistic (L^2), Bayesian Information Criterion (BIC), Akaike’s Information Criterion (AIC), degrees of freedom, classification errors, and bootstrapped p-value. The choice is based mainly on the lower BIC value, on parsimony in terms of number of parameters, non-significant p-value and of course on the interpretability of the solution. A valuable feature of LCA is that it can also include external variables and determine the potential association of the resulted class-memberships with covariates or distal outcomes (Bakk et al., 2013).

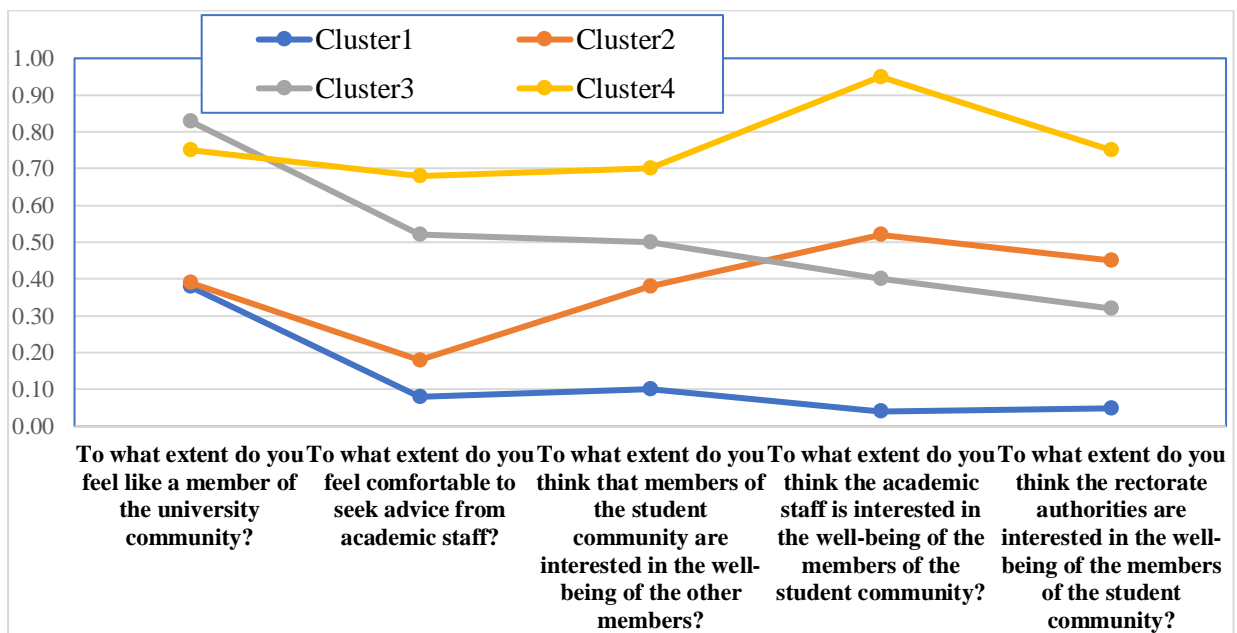
Students’ clusters/profiles of sense of belonging

According to students’ responses to the following five questions regarding their sense of belonging to their university community, different cluster solutions emerged. Table 1 presents all the LC solutions, from which the four-cluster solution was chosen as the best fit model.

Table 1. LCA Solutions and the Model Fit Indices

	LL	BIC(LL)	Npar	L^2	df	p	Class. Err.
1-Cluster	-9731.53	19539.71	10	2288.137	232		0
2-Cluster	-8970.10	18101.18	21	765.2902	221	.00	.0682
3-Cluster	-8780.27	17805.82	32	385.6182	210	.09	.0828
4-Cluster*	-8726.18	17781.97	43	277.4465	199	.16	.1307
5-Cluster	-8697.82	17809.57	54	220.7315	188	.18	.1637
6-Cluster	-8683.07	17864.38	65	191.2155	177	.22	.1805

Also, Figure 1 displays the conditional probabilities for the four clusters/profiles, namely the conditional probabilities of responding in this way. In fact, in this Figure we can observe the levels/values of the responses of the students of each group to the five questions (representative of sense of belonging), based on which the clusters/profiles were formed. Specifically, the green line depicts “the non-integrated”, the blue one “the partially non-integrated”, the purple one “the partially integrated” and the red one “the integrated” students. Table 2 presents a qualitative description of the four clusters/profiles and their corresponding sizes.

Figure 1. Conditional probabilities for the Four Clusters/Profiles of Sense of Belonging

As shown in Table 2, the students were categorized into the following four clusters/profiles: Cluster/Profile 1 included the “non-integrated” students (50.15%), namely the students who did not feel that they belong to their university community as their level of response was low in all relevant questions, Cluster/Profile 2 included the “partially non-integrated” students (27.39%), namely the students whose responses to the relevant questions ranged from moderate to low levels, Cluster/Profile 3 included the “partially integrated” students (13.48%), namely the students whose responses to the relevant questions ranged from moderate to high levels on at least one question, and finally Cluster/Profile 4 included the “integrated” students (8.98%), namely the students who felt that they belong to their university community as their level of responses was high in all relevant questions.



Table 2. Qualitative Description of the Four Clusters/Profiles of Sense of Belonging

Questions	Cluster/Profile 1	Cluster/Profile 2	Cluster/Profile 3	Cluster/Profile 4
size	.5015	.2739	.1348	.0898
Q1-To what extent do you feel like a member of the university community?	Low	Low	High	High
Q2-To what extent do you feel comfortable seeking advice from academic staff?	Low	Low	Medium	High
Q3-To what extent do you think that members of the student community are interested in the well-being of the other members?	Low	Medium	Medium	High
Q4-To what extent do you think the academic staff is interested in the well-being of the members of the student community?	Low	Medium	Medium	High
Q5-To what extent do you think the rectorate authorities are interested in the well-being of the members of the student community?	Low	Medium	Medium	High

Students’ gender and clusters/profiles of sense of belonging

It was found that the cluster memberships are not associated with gender ($p < .05$), that is, both male and female students seemed to have equal probability of possessing each of the four profiles of sense of belonging.

Associations of the four clusters/profiles of sense of belonging with reported sexual harassment events

In addition, the four students’ clusters/profiles of sense of belonging were associated with their responses to questions related to sexual harassment events (Q1, Q2, Q3, Q4, Q5, Q6). Table 3 shows that Cluster/Profile 1 (“non-integrated” students) includes students whose responses are positively associated with the response “Yes”, that is they most probably have reported sexual harassment events. The same holds for the “partially integrated” students, Cluster/Profile 3 (except in Q5). The reports of the two groups are similar as far as their experiences, however, they are differentiated regarding their perceived consequences (see next section). Cluster/Profile 4 (“integrated” students) includes students whose responses are positively associated with the response “No”, that is, they most probably have not reported sexual harassment events. The same holds for Cluster/Profile 2 (except in Q6), the “partially non-integrated” students. These two groups are similar regarding their reported experiences, nevertheless they are differentiated in their perceived consequences (see next section).

Table 3. Associations of the Four Clusters/Profiles of Sense of Belonging with Reported Sexual Harassment Events

	Cluster/Profile 1	Cluster/Profile 2	Cluster/Profile 3	Cluster/Profile 4
Covariates				
Q1-Sexual comments or jokes				
No	-.298***	.341***	-.269***	.227*
Yes	.298***	-.341***	.269***	-.227*
Q2-Inappropriate comments about body or appearance				
No	-.271***	.311***	-.307***	.268**
Yes	.271***	-.311***	.307***	-.268**
Q3-Vulgar sexual comments				
No	-.270***	.340*	-.319**	.2488
Yes	.270***	-.340*	.319**	-.2488
Q4-Insist on date/sex				
No	-.220*	.1548	-.367**	.432*
Yes	.220*	-.1548	.367**	-.432*
Q5-Persistent staring/indecent gestures				
No	-.330***	.232*	-.110	.208
Yes	.330***	-.232*	.110	-.208
Q6-Unwanted kiss/touch				
No	-.246*	.3061	-.406*	.3463
Yes	.246*	-.3061	.406*	-.3463

*Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Associations of the four clusters /profiles of sense of belonging with perceived consequences of sexual harassment events

Furthermore, the four clusters/profiles were associated with students' responses to questions related to perceived consequences of sexual harassment events. These associations are reflected in Table 4. Specifically, Cluster/Profile 1 ("non-integrated" students) is positively correlated to all the perceived consequences. These associations for Cluster/Profile 2 ("partially non-integrated" students) and Cluster/Profile 3 ("partially integrated" students) are insignificant, while Cluster/Profile 4 ("integrated" students) is negatively associated with the three of the perceived consequences (Q1, Q2, Q3) and insignificantly associated with the Q4. In other words, definitely, the negative consequences of sexual harassment events are more likely in the case of the "non-integrated" students (Cluster/Profile 1), while it is unlikely to happen in the case of the "integrated" students (Cluster/Profile 4). For the intermediate profiles, the "partially non-integrated" (Cluster/Profile 2) and "partially integrated" (Cluster/Profile 3), there are not statistically significant associations. That is, students' responses on perceived consequences of sexual harassment events, are not consistent, while the patterns for Profiles 1 and 4 are clear, leading to a firm conclusion.

Table 4. Associations of the Four Clusters/Profiles of Sense of Belonging with Perceived Consequences of Sexual Harassment Events

Questions	Cluster/Profile 1	Cluster/Profile 2	Cluster/Profile 3	Cluster/Profile 4
Q1-Influenced academic performance	.344***	.1276	.063	-.535*
Q2-Limited participation in academic actions	.331***	.1472	.2405	-.719*
Q3-Created intimidating or hostile academic environment	.344***	.0361	.0649	-.445*
Q4-Influenced physical/mental health	.172***	.0794	-.0071	-.244

*Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Associations of the four clusters/profiles of sense of belonging with negative emotional states

Finally, the four clusters/profiles of sense of belonging were associated with students’ negative emotional states, such as stress, anxiety and depression. According to Table 5, Cluster/Profile 1 (“non-integrated” students) is positively associated with stress, anxiety and depression, Cluster/Profile 2 (“partially non-integrated” students) is positively associated with depression, and Cluster/Profile 4 (“integrated” students) is negatively with stress and depression. In other words, the “non-integrated” students (Cluster/Profile 1) seemed to be much more vulnerable to stress, anxiety and depression, compared to the “integrated” students (Cluster/Profile 4).

Table 5. Associations of the Four Clusters/Profiles of Sense of Belonging with Negative Emotional States

Negative emotional states	Cluster/Profile 1	Cluster/Profile 2	Cluster/Profile 3	Cluster/Profile 4
Stress	.233***	.050	-.088	-.195*
Anxiety	.214***	.130	-.154	-.189
Depression	.310***	.155*	-.193	-.272**

*Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Conclusively, the results showed that the “integrated” students with higher sense of belonging to their university community are those who had a much lower probability of experiencing sexual harassment events (and its perceived psycho-educational consequences) as well as negative emotional states (stress, anxiety, depression), while the opposite holds for the “non-integrated” students, who reported a lower sense of belonging to their university community.

Discussion

The present study aimed to investigate the levels of university students’ sense of belonging to their academic environment, examining at the same time the relations between sense of belonging and the students’ reported experiences/perceptions of sexual harassment as well as their reported negative emotional states (stress, anxiety, depression).

According to the findings, the sense of belonging to the university community proved to be very low for most of the students who participated in this study. Specifically, based on the LCA, most students were grouped as “non-integrated” (50.15%) and “partially non-integrated” (27.39%), while significantly fewer students reflected the profile “partially integrated” (13.48%) or “integrated” (8.98%). This finding confirms Hypothesis 1, meaning that sense of belonging is varying among the participants since it is a subjective construct, which also fluctuates according to the context and the circumstances. The latter is also implied by the limited available studies, which sometimes report a moderate (Gopalan & Brady, 2020) and other times a high sense of belonging of students to their university environment (Kelly & Mulrooney, 2019). Furthermore, the four different clusters/groups of students with respect to sense of belonging (non-integrated, partially non-integrated, partially integrated, integrated) did not differ statistically significantly according to gender. This finding is not in line with Hypothesis 2 since most studies support that female students tend to feel less belonged to their university environment (Krause-Levy et al., 2021; Mooney & Becker, 2020).

Considering that the study was conducted at one of the largest Greek higher institutions in terms of area and student population (AUn, n.d.), it is likely that the formation of close interpersonal relationships with the academic teaching staff and/other students as well as the general adaptation to the academic environment is not favored for students. This speculation is based on the fact that the large size of an educational campus/environment has been reported as a significant contributor to students’ low sense of belonging and school/academic adjustment (Hendriks, 2014; Leithwood & Jantzi, 2009; Slate & Jones, 2005). Therefore, it may somehow explain why most of the participating students, regardless of their gender, reported that they feel that they do not belong and consequently are not integrated into their large university community. Additionally, this finding is probably associated with the fact that the study was conducted immediately after the lockdown in Greece due to the Covid-19 pandemic. The long-term abstinence of students from the university premises and face to face teaching procedures may have negatively affected both males’ and females’ sense of belonging to their university environment, as it has already been concluded by other researchers (Gopalan et al., 2022; Tice et al., 2021). In any case, these findings imply the necessity of taking appropriate psychoeducational measures to strengthen the students’ sense of belonging to their university environment.

Also, it was found that the students who reported feeling non-integrated into their university community appeared to be more likely to experience incidents of sexual harassment, perceive the psychoeducational consequences as more serious, and feel at higher risk for experiencing sexual harassment in the future, compared to the students who reported feeling integrated into their university community. It is, therefore, concluded, that students’ sense of belonging may significantly correlates with their experiences or perceptions of sexual harassment. This finding is fully in line with Hypothesis 3 and with the only related identified study of Perez-Trujillo et al. (2019), which mentioned that university students’ perceived connectedness to their academic context may contribute to sexual harassment and assault. The present finding highlights the dynamic of the sense of belonging, since students who feel belonged to and integrated into their university environment, they probably perceive their academic context as less impersonal, more friendly and safer. Therefore, they could be less likely to experience sexually harassing interactions that will affect them psychosocially and educationally. However, due to the correlational research design of the present study as well as the limited related findings, future studies are needed to further investigate the direction of the relationship between students’ sense of belonging and their experiences/perceptions of sexual harassment.

Additionally, the study showed that the students who reported feeling non-integrated into their university community were significantly related to experiencing negative emotional states, such as stress, anxiety and



depression, compared to the students who reported feeling integrated. This finding aligns with Hypothesis 4 as well as with related studies, which conclude that either before or after the pandemic period students' sense of belonging to their university community relates to lower levels of students' stress (Civitci, 2015; Grobecker, 2016; Jaiswal et al., 2024; Kornilaki, 2021) and depressive symptoms (Backhaus et al., 2021; Dutcher et al., 2022; Kornilaki, 2021; Peoples et al., 2024), highlighting a relatively stable positive relationship between students' sense of belonging and their mental well-being and functioning. Considering the negative influence of students' negative emotional states, such as stress and anxiety, on their academic motivation and performance (Alotaibi et al., 2020; Arcite, 2022; Karabulut et al., 2021), is becoming even more urgent to enhance the sense of belonging among students of large higher educational institutions, such as AUTH. In this way, students may experience more positive emotional states. Nevertheless, as mentioned before, the correlational research design of the present study implies the necessity to further explore the direction of the relationship between students' sense of belonging and their negative emotional states, such as stress, anxiety and depression.

Undoubtedly, the findings of the present study should be interpreted with caution due to specific limitations. First of all, the correlational collected data do not allow us to draw safe conclusions about the casual relationships between the variables involved. Also, the possibly socially acceptable responses, due to the use of self-reported scales, may have affected the internal validity of the findings, while the restriction to students from only one higher educational institution and the unequal gender-based distribution of the sample probably limits the generalizability of the results. Furthermore, quantitative methodology does not highlight in-depth students' experiences and perceptions. Finally, the fact that data were collected immediately after the Greek lockdown (and the subsequent long-term absence of students from the university environment), due to the Covid-19 pandemic, may have influenced the students' perceived sense of belonging (Gopalan et al., 2022; Tice et al., 2021) and their emotional state (Dutcher et al., 2022; Jaiswal et al., 2024; Peoples et al., 2024). The above may be the case especially for the first-year and the second-year students who did not have enough opportunities to interact in the university environment. Therefore, they had limited opportunities to experience and appreciate the university culture, which might facilitate developing sense of belonging. Nevertheless, LCA reveals the segment with different characteristics, and these latent classes would be revealed anyway, but with different percentages, if these students were not included in the sample.

The above limitations could trigger future related longitudinal studies conducted on a geographically more representative student population, with equal gender-based distribution, combining data from semi-structured interviews with the students. In this way, safer conclusions could be made regarding the relationships between the variables involved over time and qualitative aspects of the issue could also be highlighted. Finally, a future related study with additional data could compare the segment (1st and 2nd year students) with itself the next two years.

Nevertheless, the present study contributes at both a theoretical and applied level. The findings support the under-investigated relations between students' sense of belonging, on the one hand, and their negative experiences (sexual harassment) and emotional states (stress, anxiety, depression) during their academic life, on the other hand. At the same time, the findings imply the necessity of implementing appropriate psychoeducational interventions to strengthen students' sense of belonging to their university community. These interventions could be designed by the university counseling support centers, including experiential activities. Indicatively, these activities could concern orientation and mentoring programs for new students to integrate them into academic life, inclusive policies so that everyone feels welcome and worthy, strengthening/establishing various student groups and peer support groups, training of teaching staff to be

accessible and supportive of the students' needs, recognition and reward of student successes or campus events that enhance the sense of community. Finally, it should be underlined that cultivating a sense of belonging to the university community is an ongoing process and universities should continually evaluate and adapt their strategies to meet the evolving needs of their diverse student population.

References

- Allen, K. A., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87-102. <https://doi.org/10.1080/00049530.2021.1883409>
- Alotaibi, A. D., Alosaimi, F. M., Alajlan, A. A., & Abdulrahman, K. A. B. (2020). The relationship between sleep quality, stress, and academic performance among medical students. *Journal of Family and Community Medicine*, 27(1), 23-28. https://doi.org/10.4103/jfcm.JFCM_132_19
- Arcite, J. P. (2022). A correlational study on the impact of perceived sources of stress on academic performance. *Psychology and Education: A Multidisciplinary Journal*, 6(4), 1-9. <https://doi.org/10.5281/zenodo.7452156>
- Aristotle University of Thessaloniki (n.d.). *International*. <https://www.auth.gr/international/>
- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for?. *Child Development Perspectives*, 1(2), 68-73. <https://doi.org/10.1111/j.1750-8606.2007.00016.x>
- Backhaus, I., Lipson, S. K., Fisher, L. B., Kawachi, I., & Pedrelli, P. (2021). Sexual assault, sense of belonging, depression and suicidality among LGBTQ and heterosexual college students. *Journal of American College Health*, 69(4), 404-412. <https://doi.org/10.1080/07448481.2019.1679155>
- Bakk, Z., Tekle, F. B., & Vermunt, J. K. (2013). Estimating the association between latent class membership and external variables using bias-adjusted three-step approaches. *Sociological Methodology*, 43(1), 272-311. <https://doi.org/10.1177/0081175012470644>
- Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. F. (1996). Comparison of Beck Depression Inventories-IA and-II in psychiatric outpatients. *Journal of Personality Assessment*, 67(3), 588-597. https://doi.org/10.1207/s15327752jpa6703_13
- Cantor, D., Fisher, B., Chibnall, S., Harps, S., Townsend, R., Thomas, G., ... & Madden, K. (2020). *Report on the AAU campus climate survey on sexual assault and misconduct*. Westat for the Association of American Universities.
- Cheng, W., Guan, Y. Y., & Luo, Y. (2020). Campus bullying and sense of belonging to school and campus security among junior high school students: a cross-sectional survey. *Chinese Journal of Public Health*, 36(6), 889-894. <https://dx.doi.org/10.11847/zgggws1124168>
- Civitci, A. (2015). Perceived stress and life satisfaction in college students: Belonging and extracurricular participation as moderators. *Procedia-Social and Behavioral Sciences*, 205, 271-281. <https://doi.org/10.1016/j.sbspro.2015.09.077>
- Clogg, C. C. (1995). Latent class models. In G. Arminger, C. C. Clogg, & M. E. Sobel (Eds.), *Handbook of statistical modeling for the social and behavioral sciences* (pp. 311-359). Springer.
- Dutcher, J. M., Lederman, J., Jain, M., Price, S., Kumar, A., Villalba, D. K., ... & Creswell, J. D. (2022). Lack of belonging predicts depressive symptomatology in college students. *Psychological Science*, 33(7), 1048-1067. <https://doi.org/10.1177/09567976211073135>
- Folkman, S., & Lazarus, R. S. (1986). Stress processes and depressive symptomatology. *Journal of Abnormal Psychology*, 95(2), 107-113. <https://doi.org/10.1037/0021-843X.95.2.107>



- Fong, C. J., Adelugba, S. F., Garza, M., Pinto, G. L., Gonzales, C., Zarei, P., & Rozek, C. S. (2024). A Scoping Review of the Associations Between Sense of Belonging and Academic Outcomes in Postsecondary Education. *Educational Psychology Review*, 36(4), 1-44. <https://doi.org/10.1007/s10648-024-09974-y>
- Gillen-O'Neel, C. (2021). Sense of belonging and student engagement: A daily study of first-and continuing-generation college students. *Research in Higher Education*, 62(1), 45-71. <https://doi.org/10.1007/s11162-019-09570-y>
- Gopalan, M., & Brady, S. T. (2020). College students' sense of belonging: A national perspective. *Educational Researcher*, 49(2), 134-137. <https://doi.org/10.3102/0013189X19897622>
- Gopalan, M., Linden-Carmichael, A., & Lanza, S. (2022). College students' sense of belonging and mental health amidst the COVID-19 pandemic. *Journal of Adolescent Health*, 70(2), 228-233. <https://doi.org/10.1016/j.jadohealth.2021.10.010>
- Grobecker, P. A. (2016). A sense of belonging and perceived stress among baccalaureate nursing students in clinical placements. *Nurse Education Today*, 36, 178-183. <https://doi.org/10.1016/j.nedt.2015.09.015>
- Hendriks, M. A. (2014). *The influence of school size, leadership, evaluation, and time on student outcomes: Four reviews and meta-analyses* [Unpublished doctoral dissertation]. University of Twente.
- Hoel, H., & Vartia, M. (2018). *Bullying and sexual harassment at the workplace, in public spaces, and in political life in the EU*. European Parliament, Committee on Women's Rights and Gender Equality. [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/604949/IPOL_STU\(2018\)604949_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/604949/IPOL_STU(2018)604949_EN.pdf)
- Jaiswal, S., Tiwari, C., Subhash Dhaigude, A., Pandey, A., & Kamath, G. B. (2024). College students' adaptation to synchronous distance learning: exploring the effects of academic adjustment and sense of belonging on perceived stress. *Cogent Education*, 11(1), 2357907. <https://doi.org/10.1080/2331186X.2024.2357907>
- Johnson, P. A., Widnall, S. E., & Benya, F. F. (Eds.) (2018). *Sexual harassment of women: Climate, culture, and consequences in academic sciences, engineering, and medicine*. The National Academies of Sciences. <https://nap.nationalacademies.org/catalog/24994/sexual-harassment-of-women-climate-culture-and-consequences-in-academic>
- Karabulut, N., Gurcayir, D., & Yildiz, B. Z. (2021). Effect of stress on academic motivation and achievement of students in nursing education. *International Journal of Caring Sciences*, 14(1), 379-384.
- Kasdagli, S., & Mourtzaki, M. (2020). *That's Not Our Job: Sexual Harassment Against Women at Work. Examining the food-tourism industry [in Greek]*. Action Aid & Open Society Foundations. <https://notpartofourjob.actionaid.gr>
- Kelly, A. F., & Mulrooney, H. M. (2019). Student perceptions of belonging at university: a qualitative perspective. *New Directions in the Teaching of Physical Sciences*, 14(1), 1-11. <https://doi.org/10.29311/ndtps.voi14.3238>
- Kelly, M. L., Nieuwoudt, J., Willis, R., & Lee, M. F. (2024). Belonging, Enjoyment, Motivation, and Retention: University Students' Sense of Belonging Before and During the COVID-19 Pandemic. *Journal of College Student Retention: Research, Theory & Practice*, 15210251241231242. <https://doi.org/10.1177/15210251241231242>
- Kim, E., & Irwin, J. P. (2013). College Students' Sense of Belonging: A Key to Educational Success for All Students by Terrell L. Strayhorn. *The Review of Higher Education*, 37(1), 119-122. <https://doi.org/10.1353/rhe.2013.0070>
- Kornilaki, E. N. (2022). The psychological effect of COVID-19 quarantine on Greek young adults: Risk factors and the protective role of daily routine and altruism. *International Journal of Psychology*, 57(1), 33-42. <https://doi.org/10.1002/ijop.12767>

- Krause-Levy, S., Griswold, W. G., Porter, L., & Alvarado, C. (2021). The relationship between sense of belonging and student outcomes in CS1 and beyond. In A. J. Ko, J. Vahrenhold (Eds.), *Proceedings of the 17th ACM Conference on International Computing Education Research* (pp. 29-41). Association for Computing Machinery.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Lee, R. M., Keough, K. A., & Sexton, J. D. (2002). Social connectedness, social appraisal, and perceived stress in college women and men. *Journal of Counseling & Development*, 80(3), 355-361. <https://doi.org/10.1002/j.1556-6678.2002.tb00200.x>
- Leithwood, K., & Jantzi, D. (2009). A review of empirical evidence about school size effects: A policy perspective. *Review of Educational Research*, 79(1), 464-490. <https://doi.org/10.3102/0034654308326158>
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343. [https://doi.org/10.1016/0005-7967\(94\)00075-U](https://doi.org/10.1016/0005-7967(94)00075-U)
- Masika, R., & Jones, J. (2016). Building student belonging and engagement: Insights into higher education students' experiences of participating and learning together. *Teaching in Higher Education*, 21(2), 138-150. <https://doi.org/10.1080/13562517.2015.1122585>
- Maunder, R. E. (2018). Students' peer relationships and their contribution to university adjustment: The need to belong in the university community. *Journal of Further and Higher Education*, 42(6), 756-768. <https://doi.org/10.1080/0309877X.2017.1311996>
- Mooney, C., & Becker, B. A. (2020). Sense of belonging: The intersectionality of self-identified minority status and gender in undergraduate computer science students. In J. Maguire, & Q. Cutts (Eds.), *United Kingdom & Ireland Computing Education Research conference*. (pp. 24-30). Association for Computing Machinery.
- Murray, J. M., Komissarov, S., Cook, S. L., & Murray, B. L. (2022). Predictors for growth mindset and sense of belonging in college students. *Journal of Pedagogical Sociology and Psychology*, 4(1), 66-85. <https://doi.org/10.33902/JPSP.202213791>
- Núñez, A. M. (2009). A critical paradox? Predictors of latino students' sense of belonging in college. *Journal of Diversity in Higher Education*, 2(1), 46-61. <https://psycnet.apa.org/doi/10.1037/a0014099>
- Pedler, M. L., Willis, R., & Nieuwoudt, J. E. (2022). A sense of belonging at university: Student retention, motivation and enjoyment. *Journal of Further and Higher Education*, 46(3), 397-408. <https://doi.org/10.1080/0309877X.2021.1955844>
- Peoples, J. E., Butler-Barnes, S. T., Stafford, J. D., Williams, S. L., & Smith, I. (2024). Exploring the association between mental health climate and depression: the protective role of positive mental health and sense of belonging among Black college students. *Journal of American College Health*, 72(9), 3286-3296. <https://doi.org/10.1080/07448481.2022.2155466>
- Pezirkianidis, C., Karakasidou, E., Lakioti, A., Stalikas, A., & Galanakis, M. (2018). Psychometric properties of the depression, anxiety, stress scales-21 (DASS-21) in a Greek sample. *Psychology*, 9(15), 2933-2950. <https://doi.org/10.4236/psych.2018.915170>
- Perez-Trujillo, M., Jaramillo-Sierra, A. L., & Quintane, E. (2019). Connectedness as a protective factor of sexual victimization among university students. *Victims & Offenders*, 14(7), 895-919. <https://doi.org/10.1080/15564886.2019.1655121>



- Runa, S. N., Antoniadis, A. M., Becker, B. A., & Mooney, C. (2023). Student sense of belonging: The role of gender identity and minoritisation in computing and other sciences. In *Proceedings of the 25th Australasian Computing Education Conference* (pp. 87-96). ACM.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. <https://psycnet.apa.org/doi/10.1037/0003-066X.55.1.68>
- Slate, J. R., & Jones, C. H. (2005). Effects of school size: A review of the literature with recommendations. *Essays in Education*, 13(1), Article 12. <https://openriver.winona.edu/eie/vol13/iss1/12>
- Soria, K. M., & Stubblefield, R. (2015). Knowing me, knowing you: Building strengths awareness, belonging, and persistence in higher education. *Journal of College Student Retention: Research, Theory & Practice*, 17(3), 351-372. <https://doi.org/10.1177/1521025115575914>
- Tam, M. J., & Brown, C. S. (2020). Early adolescents' responses to witnessing gender-based harassment differ by their perceived school belonging and gender typicality. *Sex Roles*, 83(7), 412-425. <https://doi.org/10.1007/s11199-020-01126-0>
- Tice, D., Baumeister, R., Crawford, J., Allen, K. A., & Percy, A. (2021). Student belongingness in higher education: Lessons for professors from the COVID-19 pandemic. *Journal of University Teaching & Learning Practice*, 18(4), 1-14. <https://doi.org/10.53761/1.18.4.2>
- Vermunt, J. K., & Magidson, J. (2004). Latent class analysis. In M. S. Lewis-Beck, A. Bryman, & T. F. Liao (Eds.), *The SAGE encyclopedia of social science research methods* (Vol. 2, pp. 549-553). Sage.
- Weller, B. E., Bowen, N. K., & Faubert, S. J. (2020). Latent class analysis: a guide to best practice. *Journal of Black Psychology*, 46(4), 287-311. <https://doi.org/10.1177/0095798420930932>

Το αίσθημα του ανήκειν μεταξύ φοιτητών/ριών: Σχέσεις με την σεξουαλική παρενόχληση και αρνητικές συναισθηματικές καταστάσεις

Θάνος Τουλούπης¹, Χριστίνα Αθανασιάδου², Δημήτριος Σταμοβλάσης³

¹ Παιδαγωγικό Τμήμα Δημοτικής Εκπαίδευσης, Πανεπιστήμιο Αιγαίου

² Τμήμα Ψυχολογίας, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

³ Τμήμα Φιλοσοφίας και Παιδαγωγικής, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

KEYWORDS IN GREEK

Αίσθημα ανήκειν
Φοιτητές/ήτριες
Σεξουαλική παρενόχληση
Στρες
Άγχος
Κατάθλιψη

CORRESPONDENCE

Θάνος Τουλούπης
Παιδαγωγικό Τμήμα
Δημοτικής Εκπαίδευσης,
Πανεπιστήμιο Αιγαίου
Δημοκρατίας 1, Κτίριο “7”¹⁵
Μαρτίου”
Ρόδος, 85132
t.touloupis@aegean.gr

ABSTRACT IN GREEK

Η παρούσα εργασία αποτελεί μέρος μιας ευρύτερης έρευνας σχετικά με τις αναφερθείσες εμπειρίες σεξουαλικής παρενόχλησης φοιτητών/ριών στο πλαίσιο της ακαδημαϊκής ζωής, η οποία χρηματοδοτήθηκε από τον Ειδικό Λογαριασμό Κονδυλίων Έρευνας (Ε.Λ.Κ.Ε.) του Αριστοτέλειου Πανεπιστημίου Θεσσαλονίκης (Α.Π.Θ.), υπό την αιγίδα της Επιτροπής Ισότητας των Φύλων και του Κέντρου Κοινωνικής Έρευνας και Λήψης Αποφάσεων του Α.Π.Θ.. Συγκεκριμένα, η έρευνα μελέτησε τα επίπεδα του αισθήματος του ανήκειν των φοιτητών/ριών στην πανεπιστημιακή κοινότητα, καθώς και τη σχέση αυτού του αισθήματος με τις δηλωμένες εμπειρίες και αντιλήψεις των φοιτητών/ριών σχετικά με την σεξουαλική παρενόχληση και αρνητικές συναισθηματικές καταστάσεις, όπως το στρες, το άγχος και η κατάθλιψη. Συνολικά, 2.134 φοιτητές/ήτριες (70.5% γυναίκες) συμπλήρωσαν ανώνυμα και οικειοθελώς ένα ηλεκτρονικό ερωτηματολόγιο, το οποίο περιλάμβανε κλίμακες αυτοαναφοράς σχετικές με τις υπό μελέτη μεταβλητές (αίσθημα ανήκειν, σεξουαλική παρενόχληση, αρνητικά συναισθήματα). Σύμφωνα με τα αποτελέσματα της Ανάλυσης Λανθάνουσών Τάξεων (Latent Class Analysis, LCA), οι φοιτητές/ήτριες, δίχως στατιστικώς σημαντικές διαφορές φύλου, κατηγοριοποιήθηκαν σε 4 συστάδες/ομάδες: τους/τις «ανένταχτους/ες» (50.15%), τους/τις «μερικώς ανένταχτους/ες» (27.39%), τους/τις «μερικώς ενταγμένους/ες» (13.48%) και τους/τις «ενταγμένους/ες» (8.98%). Επιπροσθέτως, βρέθηκε πως οι «ενταγμένοι/ες» φοιτητές/ήτριες, οι οποίοι/ες παρουσίασαν υψηλότερο αίσθημα ανήκειν, συσχετίζονται με πολύ χαμηλότερη πιθανότητα εμπειρίας σεξουαλικής παρενόχλησης (και των αντιλαμβανόμενων ψυχοεκπαιδευτικών επιπτώσεων) και αρνητικών συναισθηματικών καταστάσεων. Παρά το γεγονός ότι η έρευνα διεξήχθη μετά την λήξη της καραντίνας εξαιτίας της πανδημίας COVID-19, τα αποτελέσματα αναδεικνύουν τη σχέση μεταξύ του αισθήματος του ανήκειν των φοιτητών/ριών και της ψυχοκοινωνικής τους προσαρμογής στην πανεπιστημιακή κοινότητα, υποδεικνύοντας παράλληλα την αναγκαιότητα εφαρμογής αντίστοιχων ψυχοεκπαιδευτικών παρεμβάσεων.

© 2026, Θάνος Τουλούπης, Χριστίνα Αθανασιάδου,

Δημήτριος Σταμοβλάσης

Άδεια CC-BY-SA 4.0

https://doi.org/10.12681/psy_hps.45295

Ψυχολογία: Το περιοδικό της Ελληνικής Ψυχολογικής Εταιρείας

<https://ejournals.epublishing.ekt.gr/index.php/psychology>