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The interplay of brand identification, satisfaction, and psychological well-being: a mediational role of positive WOM behavior in higher education

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Abstract

Background This study explores the interplay between department brand identification, student satisfaction, and psychological well-being among social work students. It also examines the mediating role of positive word-of-mouth (PWOM) behavior to understand how these factors interact. By fostering a sense of identity and satisfaction, universities can enhance students' well-being and institutional loyalty.

Methods A cross-sectional study design was employed with a sample of 401 undergraduate students selected through convenience sampling. Structural equation modeling (SEM) was used to analyze the relationships among department brand identification, student satisfaction, psychological well-being, and the mediating effect of PWOM behavior.

Results Findings revealed that PWOM fully mediates the relationship between department brand identification and psychological well-being, suggesting that a strong sense of departmental identity influences mental health through advocacy behaviors. Additionally, PWOM partially mediates the relationship between student satisfaction and psychological well-being, indicating both direct and indirect effects of satisfaction on mental health. These results highlight the importance of fostering a cohesive departmental culture to enhance students' emotional connections, satisfaction, and advocacy behaviors.

Conclusions The study underscores the strategic role of student satisfaction in promoting psychological well-being and institutional loyalty. By encouraging positive experiences and a sense of belonging, universities can support students' resilience and engagement. Future research should explore these relationships in different academic settings and employ longitudinal designs to provide deeper insights.

Keywords Psychological well-being, Student satisfaction, Department brand identification, Positive word-of-mouth behavior, Higher education, Quality education

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Introduction

In an era where higher education is increasingly recognized as a cornerstone of societal development, students' holistic development, psychosocial health and well-being have emerged as critical areas of focus. In a changing educational perspective, the desire to protect and promote students' mental and emotional health, beyond traditional measures of academic achievement such as employability or grades, is gaining prominence in academic research and institutional strategies [1, 2]. However, studies in this field generally focus on individual aspects of student experiences; the impact of structural factors such as institutional belonging, brand identity, and advocacy behaviors on student psychological well-being is not sufficiently examined [3–5]. In this context, a deeper understanding of the psychosocial processes affecting psychological well-being is critical for institutions to establish sustainable bonds with their students. In particular, how positive word-of-mouth (PWOM) behaviors, which are the students' connection with the brand identity at the department level, their level of satisfaction and the way they express this satisfaction, affect students' psychological well-being is a current problem that needs to be clarified.

In recent years, student psychological well-being (PWB) in higher education has become a frequently researched topic, especially with its different dimensions such as mental, emotional and social well-being. (SWB) [6–8]. The effects of students' coping skills with academic stress, self-efficacy perceptions, and social support levels on PWB have been addressed in many studies [9–11]. However, how students are positioned in the institutional context, that is, their identification with the department they study (Department Brand Identification-DBI), the effect of this institutional belonging on psychological well-being, and behavioral elements that can mediate this process (e.g. positive word-of-mouth communication) have been addressed to a limited extent in the literature [12, 13]. Although the effects of organizational identification on an individual's mental health have been discussed in general terms, especially within the framework of social identity theory [14, 15], how this structural framework is related to psychological well-being in the context of higher education has been explained to a limited extent. While the effects of PWOM in the context of student engagement are more prominent in the literature through the marketing discipline [16], the relationship of this behavior with psychological well-being is often ignored. Therefore, there is limited literature on how students' institutional experiences affect psychological well-being through not only satisfaction but also belonging, identification, and advocacy behavior.

In parallel with the need to understand these psychosocial mechanisms, higher education institutions are

centrally responsible for supporting students' resilience, sense of belonging, and self-efficacy. In addition to their academic mission, higher education institutions are centrally responsible for supporting students' resilience, sense of belonging, and self-efficacy [17–19]. However, much of the existing literature still emphasizes individual factors such as self-regulation and social support, while institutional factors are understudied [2, 20].

The student's identification with the brand at the department level, the process of transforming this identification into satisfaction and advocacy behaviors, and the contribution of these interactions to the student's psychological well-being have received limited emphasis in the literature [11, 12]. In particular, positive word-of-mouth behavior should be reconsidered not only from a marketing perspective, but also from a multidimensional and multidisciplinary perspective as a student's internalization of the institutional experience and social belonging [20]. In this respect, the model put forward by the study both adds an institutional dimension, especially through well-being, in a framework that intersects marketing and psychology literature, and offers applicable suggestions to higher education institutions to increase the mental resilience of their students.

This study empirically tests the relationships between institutional identity, satisfaction, advocacy behavior and psychological well-being in this unique context based on a department (Hacettepe University Department of Social Work), which is the pioneer of social work education in Turkey and has a high perception of institutional brand. In this respect, it has the potential to fill an important gap in the literature in terms of both context and theoretical contribution. In this context, PWB is recognized as a fundamental component that affects students' emotional and social development as well as their academic development in higher education [1, 3, 20]. Various studies have shown that student satisfaction increases psychological resilience through factors such as academic engagement and self-efficacy [21, 22]. Similarly, identification with department or institutional identity has been shown to have positive effects on individuals' life satisfaction and sense of meaningfulness [23, 24]. On the other hand, how advocacy behaviors (particularly positive word-of-mouth (PWOM)) relate to students' sense of belonging to the institution and psychological stability has been more limitedly examined [12, 16]. In the literature, PWOM is generally considered as a result of satisfaction and institutional commitment. It is also emphasized that it is considered as a structure that can contribute to the individual's self-efficacy and psychological meaning production processes [25, 26].

However, most of the aforementioned studies either treat the relationships between these variables independently or consider psychological well-being only as an

outcome variable. In particular, how positive word-of-mouth communication behavior (PWOM) mediates the relationships between departmental identity and student satisfaction and psychological well-being has not yet been clarified clearly enough. Moreover, existing studies have mostly been conducted in the context of Western geography, and findings on student experiences in countries with diverse higher education systems are limited. This study aims to make an important contribution to the field by examining the mediating role of PWOM between both departmental identity and satisfaction and psychological well-being.

In conclusion, this study aimed to investigate the factors influencing the psychological well-being (PWB) of university students, with a particular focus on the mediating role of positive word-of-mouth (PWOM) behavior in the relationships between department brand identification (DBI), student satisfaction (SS), and psychological well-being (PWB). The main purpose of the study is to evaluate how the psychological dimensions of student experiences interact with institutional belonging and advocacy behaviors within the framework of a holistic model.

On the other hand, this study was conducted at Hacettepe University Department of Social Work, which provides undergraduate education in social work in Turkey and is considered as the pioneer of the field. Founded in 1967, this department has been the sole representative of social work education in Turkey for many years and continues to accept high achieving students today [27]. This context provides both a historically and institutionally meaningful backdrop for the study and increases the potential of the findings to contribute to the academic and practical development of the discipline. In addition, this study makes theoretical and empirical contributions to the literature on the determinants of psychological well-being in higher education. Theoretically, it reveals that PWOM is not only a marketing outcome but also a psychosocial process related to students' identity construction and emotional resilience. At the empirical level, in the Turkish context, the research, conducted in a human-centered discipline such as social work, provides unique findings in understanding the effects of interdisciplinary practices on student well-being. Moreover, the proposed model has applicability for higher education policies, student engagement strategies and brand management practices.

Theoretical framework and hypotheses development

Psychological well-being

Psychological well-being (PWB) refers to a multidimensional structure that includes individuals' cognitive and affective evaluations of their lives [28]. Unlike hedonic

well-being, which focuses on the individual's level of pleasure and satisfaction with life (Kahneman et al., 1999); PWB is based on an eudaimonic approach that focuses more on the individual's self-actualization and the production of meaning in life. Ryff and Keyes [29] define PWB as an individual's ability to reach his/her true potential through environmental mastery, positive relationships with others, personal growth, purpose in life, life autonomy, and self-acceptance. This definition goes beyond an individual's temporary state of happiness and presents PWB in a holistic framework that includes more permanent and deeper dimensions.

In the context of higher education, Ryff's model is increasingly accepted and provides a framework for students' resilience, self-efficacy and social relationships [17]. In this sense, for example, environmental efficacy is manifested in a student's ability to use the university system effectively, while positive relationships can be expressed in supportive, empowering social bonds with peers and faculty. Similarly, life purpose can be linked to the goals and objectives that students wish to achieve in their academic journey. At this point, psychological well-being represents a holistic state of well-being that is productive, relational and value-based, including social and structural factors rather than individual [12, 30].

From a social psychology perspective, Social Identity Theory [14] and Self-Affirmation Theory [31] provide an important conceptual basis for understanding the factors affecting students' psychological well-being. Social identity theory is based on the assumption that individuals define their identities according to certain groups and develop their self-identity through this identification [32]. Accordingly, when individuals identify with social groups (e.g., a department) that they value and consider important, their sense of self is strengthened through belonging. In this sense, finding a place in the community, creating meaning in a social context and feeling emotionally safe directly support the social dimension of psychological well-being [30]. However, the theory of self-affirmation put forward by Steele [31] suggests that the general purpose of the self-system is to maintain an image of its integrity, moral and adaptive competence. The basic proposition here is that individuals are motivated to protect the integrity of the self [33]. This sense of integrity may differ according to the individual's cultural norms, autonomy, rationality, and being a good group member [34]. In this context, efforts to maintain self-integrity reflect the individual's desire to live in accordance with the value system and the need for internal consistency [35]. In particular, the individual's efforts to live in accordance with cultural norms, social roles, autonomy or moral standards directly support the eudaimonic dimensions of psychological well-being [35, 36]. In the process of self-affirmation, the individual searches

for meaning by taking into account the values that guide them life [33]. This situation supports the development of dimensions such as personal development, life purpose and social relationships, which form the basis of PWB.

Positive word-of-mouth behavior

Word-of-mouth communication (WOM) is defined as the process of informally sharing opinions, evaluations and experiences about products, services or organizations among individuals [37]. As a two-way concept, WOM can include both positive and negative evaluations [25]. In positive word-of-mouth (PWOM) communication, people voluntarily and informally share their positive opinions, attitudes and experiences about a product, service or organization with their social environment [38]. PWOM, which is associated with satisfaction, brand love, loyalty, and commitment [39–41] behaviors in the marketing literature, also appears as a self-expression in which the individual aims to make his/her social identity, values, and belonging visible [25, 42, 43]. In higher education institutions, students' sharing positive opinions about their departments appears as a psychological-based behavior rather than a satisfaction and information transfer. This behavior is related to the development of belonging to the group in which the individual belongs and the behavioral expression of this belonging on the basis of Social Identity Theory. In addition, people tend to identify with the objects they like, thus using the important qualities of loved objects to construct or express desired identities [44, 45]. In this sense, students who identify with their departments may show a voluntary tendency to produce positive messages about their departments and share them with their social environment through the social groups to which they feel they belong.

Identifying with the social groups to which the individual belongs and exhibiting positive attitudes towards these groups is one of the important mechanisms that support self-integrity [46]. On the basis of Self-Affirmation theory, individuals maintain their psychological balance by exhibiting behaviors that affirm their values and identities while acting with the motivation to protect their self-integrity [34]. In this sense, PWOM enables individuals to express their personal values and social belonging by voluntarily supporting an institution or department that they identify with and recommending it to others.

As a result, students' behaviors of feeling self-worth, maintaining a sense of belonging and consolidating their social position have the potential to support the basic components of psychological well-being. Recent studies reveal that there is a reciprocal and reinforcing relationship between PWOM and PWB [12, 13]. In the light of this information, it has emerged from the idea that

PWOM may affect students' psychological well-being through both the reinforcement of social identities and the support of self-affirmation processes.

Within the framework of this bidirectional relationship, the study proposes the following hypothesis:

Hypothesis 1 (H1) Positive word-of-mouth communication (PWOM) is related to psychological well-being (PWB).

Department brand identification

Department brand identification (DBI) is a psychological commitment that occurs when students see the academic unit they study as part of their personal identity [15]. This commitment develops as a result of the overlap between the values of the individual and the values represented by the department and gains strength as the student internalizes the institutional identity [47]. When evaluated in the context of higher education, this identification contains a deeper definition of belonging and self for students than institutional belonging. According to Social Identity Theory, individuals derive part of their self-concept from the social groups to which they belong [14]. In other words, individuals shape and develop their self-concepts by identifying with the groups they belong to [48, 49]. According to Büyükdag and Kitapçı [50], when individuals see these groups as meaningful, distinctive and emotionally important to them, they are more open to identification and strive for it. In this sense, when students identify with their departments, they are more likely to internalize the values of this department, see their achievements as their own, and behave in accordance with the social identity they share [47].

The impact of DBI on student behavior does not only remain at the cognitive and emotional level, but also manifests itself in behavioral outcomes. Students who identify with the department brand tend to express their department (brand) more frequently, more willingly and more positively in their social circles [12]. As the level of identification increases, students are more likely to advocate for their department, recommend it to others, and indirectly voluntarily support the department brand image [51–53]. At this point, WOM behavior corresponds as an expression of identity; as individuals reflect their values to others through the department brand, they also reinforce and increase their sense of social approval and belonging [54]. In this sense, department brand identification is expected to encourage behavioral outcomes such as positive word-of-mouth and increase students' positive evaluations and satisfaction levels towards the department. In addition, the strong evidence in the literature that feeling belonging to a social group has positive effects on mental health, self-esteem, and life satisfaction [24, 29] suggests that department identification, which is

an extension of social identity, is expected to have indirect effects on students' psychological well-being. Based on this conceptual framework, the following hypothesis is proposed:

Hypothesis 2 (H2) Department brand identification (DBI) is associated with positive word-of-mouth communication (PWOM).

Hypothesis 3 (H3) Department brand identification (DBI) is associated with psychological well-being (PWB).

Hypothesis 4 (H4) Positive word-of-mouth communication (PWOM) has a mediating role in the relationship between department brand identification (DBI) and psychological well-being (PWB).

Student satisfaction

Student satisfaction (SS) refers to students' perceptual evaluations of the totality of their academic, administrative and social experiences of university life [55]. This construct is not only an indicator of meeting expectations, but also a multidimensional concept that reflects the student's emotional alignment and level of satisfaction with the institutional experience [56]. In the literature, satisfaction is positively correlated with variables such as student engagement, achievement motivation and self-efficacy [21].

The effects of SS on PWB in higher education settings are also frequently emphasized in the literature. A high level of satisfaction increases students' ability to cope with academic stress, strengthens their perception of social support, and increases their overall life satisfaction [22, 57]. In this context, satisfaction becomes a central variable that affects not only the student's institutional evaluation but also their psychological resilience and inner balance.

In terms of behavioral outcomes, it is known that students with high satisfaction levels tend to share their experiences with others and recommend their university to others. This process is one of the key determinants of positive word-of-mouth behavior [55, 58]. When students feel supported and valued, they voluntarily undertake the advocacy of the organization and thus contribute to strengthening the institutional image [59]. In this context, satisfaction becomes not only an internal assessment but also a social element that manifests student behavior. PWOM behavior is a means by which students express their commitment to the institution at both emotional and behavioral levels [60].

While the existing literature discusses the direct effects of satisfaction on PWB, it has focused less on the mediating mechanisms that explain how this relationship emerges. PWOM behavior is considered as a potential

psychosocial carrier in this process. As students communicate their satisfaction to others, these exchanges reinforce a sense of self-efficacy, strengthen perceptions of social acceptance, and increase a sense of belonging. Thus, PWOM becomes an important mechanism that indirectly supports the effect of satisfaction on PWB [25, 61].

In line with this theoretical background, the following hypotheses are proposed:

Hypothesis 5 (H5) Student satisfaction (SS) is associated with positive word-of-mouth communication (PWOM).

Hypothesis 6 (H6) Student satisfaction (SS) is related to psychological well-being (PWB).

Hypothesis 7 (H7) Positive word-of-mouth communication (PWOM) has a mediating role in the relationship between student satisfaction (SS) and psychological well-being (PWB).

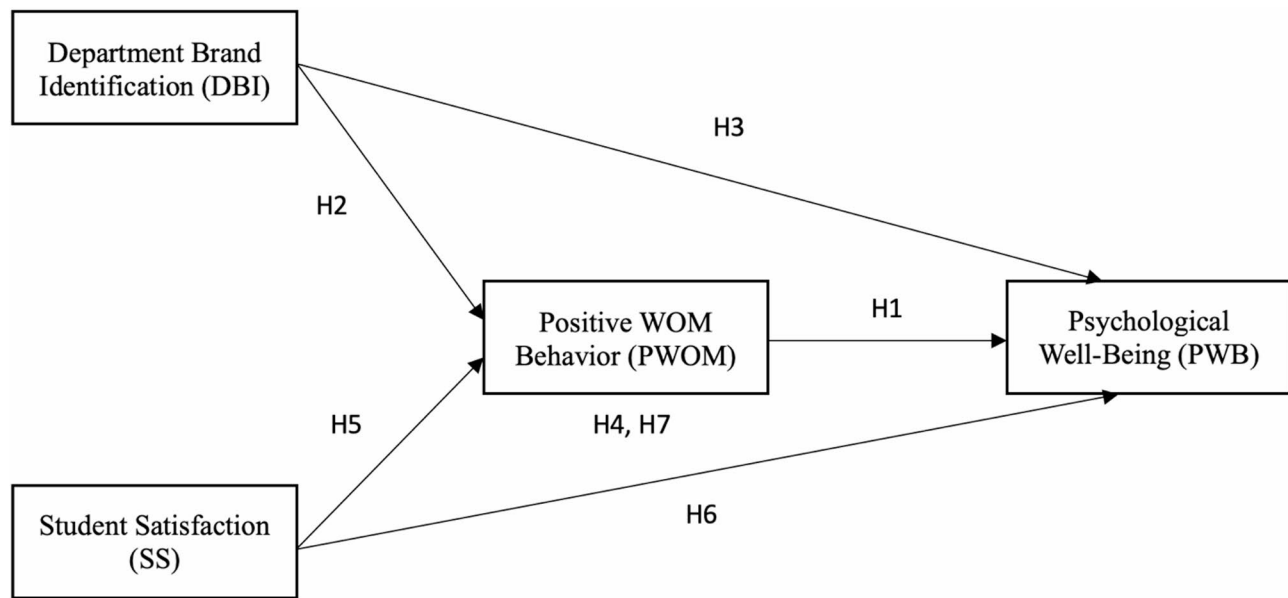
Figure 1 illustrates the conceptual framework developed for this study, integrating interrelated constructs such as DBI, SS, PWOM, and PWB. The conceptual framework addresses significant gaps in the existing literature by highlighting the largely unexplored mediating role of PWOM within the context of social work education. This integrated model offers a comprehensive approach to understanding how institutional identity, satisfaction, and advocacy behaviors contribute to students' PWB in the higher education context. Figure 1 visually represents these hypothesized relationships, providing a structured basis for testing both direct and indirect effects within the scope of this research.

Methods

Research design and participants

This research was conducted within the framework of a cross-sectional design by adopting a quantitative research methodology approach. In line with the main purpose of the study, a relational model proposal that can be tested with Structural Equation Modeling (SEM) was developed and the survey method was used to obtain analyzable data in this direction. SEM offers an analysis strategy suitable for the theoretical structure of the study due to its capacity to test direct and indirect relationships between variables at the same time.

The population of the study consisted of all students ($N = 657$) enrolled in the Social Work undergraduate program at Hacettepe University, a state university in Turkey. The sample consisted of 401 students who were actively attending the relevant program and voluntarily participated in the study. The selection criteria for participation in the study were (1) being enrolled in the undergraduate program of the Department of Social Work at Hacettepe

**Fig. 1** Conceptual framework of the study**Table 1** Demographic characteristics of the respondents

Variable	Frequency (n)	Ratio (%)
<i>Gender</i>		
Female	338	84.3
Male	63	15.7
<i>Age</i>		
< 20 years old	184	45.9
20–22	183	45.6
> 22 years old	34	8.5
<i>Year of Study</i>		
First	85	21.2
Second	105	26.2
Third	107	26.7
Fourth and above	104	25.9

University, (2) having active student status during the data collection period, and (3) voluntarily agreeing to participate in the study. As exclusion criteria, students double majoring in another department were excluded from the study.

Since full access to randomness was not possible in the sampling process, convenience sampling method based on accessibility was preferred. As a result of the G*Power analysis, the minimum sample size for 95% confidence level and medium effect size was determined as approximately 248 and this number was exceeded. This supports the adequacy of the sample in terms of statistical power and the reliability of the findings.

Demographic characteristics of the participants are shown in Table 1. In terms of demographic distribution, 84.3% of the participants were female and 15.7% were male. In terms of age distribution, the majority of the participants are under the age of 20 (45.9%) and between the

ages of 20–22 (45.6%). In terms of grade level, the sample represents all years of education from first to fourth grade in a balanced manner. In line with these characteristics, it is considered that the sample group reflects the basic demographic characteristics of the research population and is adequate in terms of representativeness.

Data collection process

The research data were obtained from undergraduate students studying at Hacettepe University, Department of Social Work. Before the application, the department administration was contacted and informed about the purpose of the research and the ethical approval process, and the necessary permissions were obtained.

The data collection process was carried out by the researchers as a face-to-face questionnaire application in the classroom environment. The purpose of the study, the principle of voluntary participation and the principle of anonymity were clearly explained to the students, and the questionnaires were applied after their written consent was obtained. It took an average of 10–12 min to complete the questionnaire. No financial or moral incentives were provided to the participants; only voluntary participation was taken as a basis. The 401 completed questionnaires were included in the analysis process.

The data collection process was completed as planned and no technical or ethical problems were encountered.

Data collection instruments

The following tools included in a single questionnaire were used to collect the study data: The Demographic Characteristics Form (3-item), Department Brand Identification (6-item DBI), Positive WOM Behaviour (3-item

PWOM), Student Satisfaction (4-item SS), and Psychological Well-Being (18-item PWB). All constructs in this study were measured reflectively using multi-item scales on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Dawes [62] compared data collected using 5-point or 7-point scales with data from 10-point scales and found that 5-point and 7-point scales produced similar mean scores. Accordingly, 5-point Likert scale was employed in this study to measure DBI, PWOM, SS, and their influence on the PWB of students.

All scales used in this study were applied with versions that had been previously adapted into Turkish and validity and reliability studies had been conducted. However, in order to maintain the integrity of the meaning of the scales and increase their suitability for the target group, the statements were revised and expert opinion was obtained. In order to support the accuracy of the translation processes, forward-backward translation method was used. Accordingly, the original statements of the scales were translated into Turkish by two independent researchers and then translated back into the original language by another expert to assess the content consistency. Before the final forms were created, the comprehensibility and linguistic appropriateness of the scales were tested with a pilot study and minor adaptations were made to the items deemed necessary. This process aimed to strengthen the conceptual and cultural validity of the instruments.

Demographic form

A short demographic information form developed by the researchers was used to determine the socio-demographic characteristics of the participants. The form included three main variables: gender, age, and grade level of the students. This information was used to define the structure of the sample and to provide contextual integrity in the interpretation of the findings.

Department brand identification (DBI)

The DBI scale, originally developed by Mael and Ashforth [15] to measure organizational identification at the university or institutional level, was adapted in this study to assess students' identification with their academic department. In this study, the scale was specifically employed to evaluate DBI among students, focusing on their connection and sense of belonging to their academic program. The Cronbach's Alpha value for this study was calculated as 0.889, indicating strong internal consistency.

Positive WOM behaviour (PWOM)

The PWOM scale was developed by Casidy and Wymer [16]. The scale aims to capture the most significant and influential aspects of students' PWOM behaviors,

including their discussions about the department, sharing reviews across various communication platforms, and recommending the department to others. In this study, the PWOM scale was used to measure students' PWOM behaviors, and the Cronbach's Alpha value was calculated as 0.890 for this study.

Student satisfaction (SS)

The SS scale, originally developed by Parahoo et al. [55] in their study was designed to measure SS at the university level. In the current study, this scale was adapted to focus specifically on department-level satisfaction, aiming to assess students' contentment with their academic department rather than the university as a whole. In this study, the SS scale demonstrated excellent internal consistency, with a Cronbach's Alpha value of 0.943.

Psychological well-being (PWB)

The PWB scale, developed by Clarke et al. [63], provides a framework for understanding levels of well-being, particularly in the context of higher education, where PWB has become an increasingly significant area of research. In this study, the scale was utilized to assess the PWB of students in the context of their academic experiences. The Cronbach's Alpha value for this study was calculated as 0.982, demonstrating excellent internal consistency.

Preliminary implementation (Pilot Test)

In order to evaluate the comprehensibility and validity of the measurement tools to be used in the research and the functioning of the application process, a pre-test (pilot study) was conducted before the data collection process. In this context, the questionnaire form was applied to 30 students studying at Hacettepe University, Department of Social Work who were not included in the study.

As a result of the pilot study, no expressions that could create ambiguity in the scale items were detected. In addition, the data collection process was found to be consistent in terms of content and smooth in terms of application. In line with the feedback received, no structural or linguistic adjustments were needed in the scale form. These results showed that the scales can be used safely and validly in the actual data collection process.

The ethical aspect of the study

Ethical approval for the study was obtained from the Hacettepe University Ethics Committee (Approval Number: 35853172-900). All stages of the study were conducted in line with the scientific research principles of the Council of Higher Education and the University.

Before the data collection process, the participants were informed about the purpose, content, and voluntary nature of the study. The written consent of the participants was obtained and it was clearly stated that they

had the right to interrupt or completely withdraw from the research at any time. The data obtained from the participants were collected completely anonymously and analyzed in accordance with the principle of confidentiality. During the research process, no practice that would harm or pressure any participant was included. The research was conducted in accordance with the principles of the Declaration of Helsinki.

Table 2 Measurement model

Constructs & items	Loadings	Cronbach's alpha	AVE	Composite reliability
Department Brand Identification (DBI)		0.889	0.574	0.889
DBI1	0.769			
DBI2	0.654			
DBI3	0.805			
DBI4	0.843			
DBI5	0.784			
DBI6	0.674			
Positive WOM Behavior (PWOM)		0.881	0.730	0.890
PWOM1	0.775			
PWOM2	0.906			
PWOM3	0.877			
Student Satisfaction (SS)		0.940	0.806	0.943
SS1	0.784			
SS2	0.933			
SS3	0.963			
SS4	0.900			
Psychological Well-Being (PWB)		0.982	0.754	0.982
PWB1	0.900			
PWB2	0.860			
PWB3	0.857			
PWB4	0.870			
PWB5	0.852			
PWB6	0.863			
PWB7	0.876			
PWB8	0.870			
PWB9	0.877			
PWB10	0.852			
PWB11	0.879			
PWB12	0.869			
PWB13	0.871			
PWB14	0.862			
PWB15	0.863			
PWB16	0.880			
PWB17	0.856			
PWB18	0.873			

Note. DBI = Department Brand Identification; PWOM = Positive WOM Behavior; SS = Student Satisfaction; PWB = Psychological Well-Being

Data analysis

A total of 401 valid forms were used in this study. The data were analyzed using IBM SPSS Statistics 22.0 and AMOS 23.0 software. Initially, normality checks were conducted to assess the suitability of the data for advanced statistical analyses. The skewness and kurtosis values for the items were found to be within the acceptable range of -1.50 to $+1.50$, indicating that the data followed a normal distribution [64]. This study was designed as a cross-sectional and quantitative study involving undergraduate students enrolled in the social work program.

Confirmatory Factor Analysis (CFA) was conducted using AMOS 23.0 software to assess the convergent and discriminant validity of the constructs and to evaluate the model fit. This analysis ensured that the constructs adequately represented the theoretical framework proposed in the study. Subsequently, Structural Equation Modeling (SEM) was performed to test the relationships between the variables using the maximum likelihood estimation method. SEM allowed for a comprehensive examination of the complex interactions among dependent, independent, and mediating variables. The analysis included an evaluation of correlations, construct reliability, average variance extracted (AVE), and composite reliability to ensure the robustness of the model. Mediation analysis was conducted to examine the role of PWOM as a mediating variable in the relationships between DBI, SS, and PWB.

An additional independent samples t-test was conducted to examine whether the main variables differed by gender. The results indicated that there were no significant gender-based differences across the variables (see Appendix A for detailed results).

Findings

Measurement model evaluation

We adopted the two-step approach recommended by Anderson and Gerbing [65] for constructing and testing the measurement model. In the first step, the measurement model was assessed to examine its reliability and validity. In the second step, the structural model was evaluated to test the research hypotheses.

The standardized item loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha values are presented in Table 2. To confirm convergent validity, AVE values should exceed 0.5, and CR values should exceed 0.7 [66]. As shown in Table 2, all values met or exceeded the recommended thresholds. Furthermore, Cronbach's alpha values for all constructs were above 0.6, indicating an acceptable level of internal consistency [67].

To evaluate discriminant validity, the square root of the AVE values ($\sqrt{\text{AVE}}$) was compared with the correlation coefficients between constructs. As shown in Table 3, the

Table 3 Correlations between all factors (Diagonal elements are square roots of the average variance extracted)

Constructs	Mean	SD	DBI	PWOM	SS	PWB
Department Brand Identification (DBI)	3.59	0.88	0.76			
Positive WOM Behavior (PWOM)	3.63	0.93	0.612**	0.85		
Student Satisfaction (SS)	3.37	0.96	0.465**	0.709**	0.90	
Psychological Well-Being (PWB)	3.42	1.20	0.325**	0.586**	0.629**	0.87

Note: Values in bold indicate square root of AVE values * $p < 0.01$; ** $p < 0.001$

Table 4 Structural equation modelling results

Hypotheses	Standardized path coefficient	t-value	p-value	Hypothesis status
H ₁ : PWOM → PWB	0.398	3.592	< 0.001	Supported
H ₂ : DBI → PWOM	0.393	9.157	< 0.001	Supported
H ₃ : DBI → PWB	-0.093	-1.241	> 0.05	Non-Supported
H ₅ : SS → PWOM	0.563	10.753	< 0.001	Supported
H ₆ : SS → PWB	0.723	7.275	< 0.001	Supported

Note: Fit statistics: $\chi^2(420df) = 1.798$ ($p = 0.00$), NFI = 0.94, GFI = 0.90, CFI = 0.97, RMSEA = 0.045

Table 5 Mediating role of positive WOM on psychological wellbeing

		Effect Size	SE	95% CI Lower	95% CI Upper	P	Conclusion
H4: DBI > PWOM > PW	Total Effect	0.447	0.062	0.347	0.551	0.000	Full Mediation
	Direct Effect	-0.104	0.098	-0.273	0.551	0.279	
	Indirect Effect	0.551	0.084	0.430	0.708	0.000	
H7: SS > PWOM > PW	Total Effect	0.987	0.072	0.882	1.121	0.004	Partial Mediation
	Direct Effect	0.731	0.116	0.544	0.964	0.003	
	Indirect Effect	0.256	0.083	0.133	0.402	0.004	

$\sqrt{\text{AVE}}$ values for each construct were significantly greater than their correlations with other constructs, indicating good discriminant validity [68, 69].

The findings of the measurement model validation confirm the reliability and validity of the constructs used in the study. The robust statistical foundations established by the CFA and SEM analyses ensure that the model adequately represents the hypothesized relationships. The inclusion of mediating analysis highlights the indirect effects of PWOM in connecting DBI and SS to PWB, contributing significantly to the understanding of these relationships.

The structural model evaluation

The structural model was assessed using AMOS 26, and the results indicated a good model fit with $\chi^2/df = 1.798$, NFI = 0.938, GFI = 0.90, CFI = 0.972, and RMSEA = 0.045. These indices meet the commonly accepted thresholds for SEM analyses, demonstrating the robustness of the proposed model [64, 66].

The results of Structural Equation Modeling are shown in Table 4. The findings confirm that Positive Word-of-Mouth Behavior (PWOM) positively and significantly impacts Psychological Well-Being (PWB) ($\beta = 0.398$, $p < 0.001$), supporting H1. Similarly, Department Brand Identification (DBI) was found to significantly influence PWOM ($\beta = 0.393$, $p < 0.001$), confirming H2. However, the direct relationship between DBI and PWB was not

significant ($\beta = -0.093$, $p > 0.05$), indicating that H3 is not supported.

Furthermore, the results highlight the significant positive effects of SS on both PWOM ($\beta = 0.563$, $p < 0.001$) and PWB ($\beta = 0.723$, $p < 0.001$), thereby supporting H5 and H6. These findings underscore the critical role of SS in fostering both PWB and PWOM behavior.

Mediation effects of positive word-of-mouth behavior

The mediating role of PWOM in the relationships between DBI, SS, and PWB was examined using Structural Equation Modeling (SEM). This approach was selected due to its ability to simultaneously estimate complex relationships among latent and observed variables, making it particularly suitable for mediation analysis. The bootstrapping method with 5,000 resamples was applied to estimate the indirect effects and their confidence intervals, ensuring robust and bias-corrected results [70].

The results of the mediation analysis are presented in Table 5, detailing the direct, indirect, and total effects of DBI and SS on PWB through PWOM. Bootstrapped confidence intervals confirmed the statistical significance of the indirect effects, supporting the mediating role of PWOM in both relationships. By employing SEM with bootstrapping, this study provides a nuanced understanding of the pathways through which DBI and SS impact PWB, while addressing potential issues related to measurement error and model complexity.

Results from SEM analysis indicate that PWOM fully mediates the relationship between DBI and PWB. The total effect of DBI on PWB was significant and positive ($\beta = 0.447$, $SE = 0.062$, $p < 0.001$). However, the direct effect was not statistically significant ($\beta = -0.104$, $SE = 0.098$, $p = 0.279$), while the indirect effect through PWOM was significant ($\beta = 0.551$, $SE = 0.084$, $p < 0.001$). These findings suggest that DBI influences PWB exclusively through its impact on PWOM, confirming H4.

For SS, the analysis reveals a partial mediation effect of PWOM in its relationship with PWB. The total effect of SS on PWB was significant and positive ($\beta = 0.987$, $SE = 0.072$, $p = 0.004$), as was the direct effect ($\beta = 0.731$, $SE = 0.116$, $p = 0.003$). The indirect effect through PWOM was also significant ($\beta = 0.256$, $SE = 0.083$, $p = 0.004$), confirming that SS enhances PWB both directly and indirectly through PWOM. This finding supports H7 and highlights the dual pathways through which SS contributes to PWB.

Discussion

This study provides important findings for understanding the dynamics of psychological well-being (PWB) in higher education, revealing the interactions between department brand identification (DBI), student satisfaction (SS) and positive word-of-mouth communication (PWOM). The results suggest that PWOM is an important mediating mechanism in the relationship between institutional factors and students' PWB. In particular, PWOM fully mediates the relationship between DBI and PWB, suggesting that the identity bond that students form with their academic department influences their mental health, mainly through advocacy behaviors. Furthermore, the partial mediation between SS and PWB suggests that satisfaction contributes directly and indirectly to PWB. At this point, it is noteworthy that not only mediation relationships but also the direct effect of satisfaction on PWB was found to be significant. This result shows that satisfaction is an independent determinant of students' psychological resilience and emotional integrity, suggesting that satisfaction-oriented interventions can directly contribute to PWB. These findings make an important contribution by examining in depth these specific relationships that have not been adequately addressed in the literature regarding the mediating role of PWOM.

The full mediating effect between DBI and PWOM emphasizes the importance of departmental identity as a psychological anchor for students. Based on social identity theory and the self-affirmation framework, students are more likely to engage in PWOM when they internalize their departmental identity, thereby affirming their belonging and gaining emotional strength [71, 72]. This process not only contributes to organizational

reputation, but also strengthens students' sense of purpose, emotional resilience and social belonging. This finding is in line with previous research, supporting the role of institutional identity on sense of belonging and PWB [24, 60]. Furthermore, advocacy behaviors such as PWOM provide an additional perspective to the studies on social identity and institutional commitment by showing how institutional branding can indirectly contribute to students' mental health [12, 42]. These results highlight the links between identity, advocacy, and well-being, providing a better understanding of how academic environments contribute to students' holistic development.

On the other hand, the partial mediation between SS and PWB suggests that satisfaction affects students' mental health in two different ways. Satisfaction directly strengthens PWB by increasing the sense of achievement and emotional stability, and indirectly supports well-being through PWOM. Satisfied students establish stronger ties with their academic and social environment by sharing their positive experiences [73, 74]. This finding reveals that satisfaction is not only a factor that encourages advocacy behaviors, but also an important determinant of emotional well-being. It is clear how satisfaction supports emotional fulfilment and how this encourages students to make positive contributions to their academic and social environments [22, 59]. Through PWOM, satisfied students reinforce their sense of belonging, creating a cycle of mutual support for both themselves and their communities [75]. These dynamics illustrate how satisfaction shapes not only individual resilience but also the social and institutional ecosystems in which students thrive.

Furthermore, this study reveals the dual role of PWOM as both a reflection of satisfaction and identity and as a mechanism that reinforces psychological outcomes. By sharing their positive experiences, students strengthen their sense of community and self-efficacy. These elements are essential components of well-being [76, 77]. This reciprocal relationship between advocacy behaviors and mental health highlights the central role of PWOM in higher education research [4, 26].

Although the direct relationship between DBI and PWB was not statistically significant, the demonstration of an indirect effect through PWOM reveals how identity-based behaviors can lead to positive mental health outcomes. This finding partially contradicts the widespread literature on the direct effect of identification on PWB [24, 29]. In terms of explaining this contradiction, the context of the study can be characterized as an important factor. For example, even if students' DBI levels were strong, the lack of specific social support structures or identity transition experiences for the direct effect on PWB may have weakened this relationship. Moreover, the fact that the effect of identification

is indirectly reflected on PWB through mediators such as advocacy behavior may lead to the consideration that behavioral mechanisms are more dominant in terms of psychological outcomes [78, 79]. This also reinforces the premise of self-affirmation theory, suggesting that when identity is affirmed through action (i.e., PWOM), it produces stronger psychological effects than through mere cognitive alignment. On the other hand, the cross-sectional design of the study may also be a potential factor affecting this result. Since structures based on belonging and identity construction, such as DBI, involve dynamic processes that develop over time, longitudinal research designs are needed to evaluate such effects more accurately. This finding challenges simplistic assumptions that institutional branding directly affects well-being, suggesting that its impact is more likely to occur through behavioral and social mechanisms. For higher education institutions, this suggests that building a strong departmental identity should be supported by strategies that encourage students to share their experiences. Thus, PWOM can be used as a well-being tool [80, 81].

Theoretical implications

This study contributes to the theoretical dimension of psychological well-being (PWB) in higher education and proposes a unique theoretical framework by integrating variables such as department brand identification (DBI), student satisfaction (SS) and positive word-of-mouth communication (PWOM) in a single structural model. The findings fill an important gap in the literature by explaining the impact of institutional belonging and satisfaction on students' mental health through behavioral mediation mechanisms.

First, within the framework of Social Identity Theory, this study shows that DBI is a psychological resource that influences not only the sense of belonging but also well-being through PWOM. The fact that the direct relationship between DBI and PWB was not found to be statistically significant indicates that identification can produce psychological outcomes at the point where it turns into behavior, that is, through PWOM. At the theoretical level, this finding reveals that the effect of social identity depends not only on cognitive but also on behavioral reflections.

Second, the finding of both direct and indirect effects of satisfaction on PWB suggests that satisfaction is not only an outcome of evaluation but also a psychological resource that supports emotional integrity and resilience. These findings, in relation to self-efficacy and resilience theories, provide a theoretical explanation for the regulatory role of satisfaction on emotional stability.

Third, the mediating role of PWOM on well-being in relation to both satisfaction and DBI in the study suggests that this behavioral outcome should be considered not

only as a marketing but also as a psychosocial process. In this respect, the study makes a unique theoretical contribution to the field as one of the few studies examining the psychological effects of PWOM in the higher education context.

Finally, the lack of a significant direct relationship between DBI and PWB questions the assumptions about the direct effect of identification on well-being, which is widely accepted in the literature, and suggests that the effect of institutional belonging is more likely to occur through behavioral means. This suggests that in future studies, variables that develop over time, such as DBI, should be examined with longitudinal designs. Thus, the structural effects of belonging on well-being can be explained in a healthier way.

Practical implications

The implications of the study point to concrete strategies that higher education institutions can implement to support students' psychological well-being. First, building a strong departmental brand identity is critical. Findings have shown that the impact of DBI on PWB is manifested through PWOM. Therefore, departments should build an inclusive and integrative culture, organize events that encourage student participation, share departmental achievements, and involve students in decision-making processes. Such practices support PWOM behaviors by increasing students' emotional attachment to the institution, thereby strengthening their PWBs.

Second, student satisfaction (SS) is a strategic element for both advocacy behaviors and PWB. According to the findings, satisfaction has both direct and indirect effects on PWB. In this context, universities should improve teaching quality, accelerate student support services and increase student satisfaction through practices such as mentoring that increase interaction. In addition, feedback mechanisms should be established to respond quickly to the changing needs of students.

Third, the mediating role of PWOM shows that this behavior is not only a form of communication but also a means of psychological support. Institutions can encourage PWOM through digital platforms, alumni-network events and campaigns that make student experiences visible. In particular, creating environments where students can share their personal success stories increases both belonging and psychological resilience.

Finally, these findings suggest that the student experience is not limited to academic achievement but also encompasses psychological, social and institutional engagement dimensions. Structures such as DBI and SS affect not only student satisfaction, but also long-term engagement, alumni interaction, and institutional reputation. Accordingly, higher education institutions should develop strategies that address not only short-term

student needs but also long-term psychosocial development goals.

Limitations and future research

Despite the important contributions of this study, some limitations should be considered. Firstly, due to the cross-sectional research design, it is not possible to determine cause-effect relationships with certainty. Longitudinal studies are necessary to understand how the relationships between DBI, SS, PWOM and PWB change over time. Secondly, the research was conducted only in a specific academic department of a single university. This may limit the generalizability of the findings across different disciplines, institutions and cultural contexts. Future research could replicate the study with larger and diverse samples to see if these dynamics hold true in different settings. Third, although this study focused on the mediating role of PWOM, other possible mediators such as social support, academic self-efficacy or institutional trust were not addressed. Examining these factors may provide a more comprehensive view of how institutional and individual variables influence PWB.

Conclusion

This study advances the understanding of PWB among university students by highlighting the mediating role of PWOM behavior in the relationships between DBI, SS, and well-being. By situating the research within the prestigious Social Work Department of Hacettepe University, the findings emphasize the critical role of institutional branding and SS in shaping mental health outcomes and advocacy behaviors. The results offer actionable insights for higher education institutions, suggesting strategies to enhance SS, foster a sense of belonging, and promote psychological resilience. Future research should build upon these findings to explore additional mediators, longitudinal effects, and broader cultural contexts, further enriching the field of higher education research.

Appendix A

Independent samples t-test was applied to determine whether there is a significant difference between the averages of DBI (Department Brand Identity), PWOM (Positive Word-of-Mouth Communication), SS (Student Satisfaction) and PWB (Psychological Well-Being) according to the gender of the participants. The relevant results are presented in Table 6. As a result of the analysis, it was found that there was no statistically significant difference between male and female participants in terms of the variables of DBI ($t(76.93) = 0.246, p = 0.806$), PWOM ($t(399) = 0.012, p = 0.990$), SS ($t(399) = 0.836, p = 0.404$) and PWB ($t(399) = -0.309, p = 0.758$). These findings indicate that gender does not play a differentiating role in participants' perceptions across the examined constructs.

Table 6 Gender differences in main study variables (Independent samples t-test results)

Variable	t(df)	p	Mean Difference	95% CI of the Difference
DBI	t(76.93) = 0.246	0.806	0.035	[-0.248, 0.318]
PWOM	t(399) = 0.012	0.990	0.002	[-0.251, 0.254]
SS	t(399) = 0.836	0.404	0.110	[-0.148, 0.368]
PWB	t(399) = -0.309	0.758	-0.051	[-0.376, 0.274]

Author contributions

MA conceptualized the study, designed the methodology, and led the manuscript drafting. HA contributed to the development of the research framework, data collection, and statistical analysis. Both MA and HA collaboratively refined the analysis plan and interpreted the results. Additional revisions and critical feedback were provided by MA and HA. All authors reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Data availability

The datasets utilized and analyses conducted in the current study are available upon reasonable request from the corresponding author.

Declarations

Ethics approval and consent to participate

Ethical approval for the study was obtained from the Hacettepe University Ethics Committee (Approval Number: 35853172-900). Prior to conducting the study, participants were informed about the purpose and procedures of the research, and their written consent was obtained. Additionally, verbal consent was secured from the relevant departmental administrator, along with the ethics committee approval, before the study commenced. The research was conducted in accordance with the principles of the Declaration of Helsinki.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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References

- Douwes R, Metselaar J, Pijnenborg GHM, Boonstra N. Well-being of students in higher education: the importance of a student perspective. *Cogent Educ.* 2023;10(1):2190697. <https://doi.org/10.1080/2331186X.2023.2190697>
- Jiang J, Tanaka A. Autonomy support from support staff in higher education and students' academic engagement and psychological well-being. *Educ Psychol.* 2022;42(1):42–63. <https://doi.org/10.1080/01443410.2021.1982866>
- Au A, Caltabiano NJ, Vaksman O. The impact of sense of belonging, resilience, time management skills and academic performance on psychological well-being among university students. *Cogent Educ.* 2023;10(1):2215594. <https://doi.org/10.1080/2331186X.2023.2215594>
- Khatri P, Duggal HK, Lim WM, Thomas A, Shiva A. Student well-being in higher education: scale development and validation with implications for management education. *Int J Manag Educ.* 2024;22(1):100933.
- Yuan R, Liu MJ, Luo J, Yen DA. Reciprocal transfer of brand identity and image associations arising from higher education brand extensions. *J Bus Res.* 2016;69(8):3069–76. <https://doi.org/10.1016/j.jbusres.2016.01.022>

6. Wang Q, Zhang Y, Zhang Y, Chen T. The impact of mindful learning on subjective and psychological well-being in postgraduate students. *Behav Sci*. 2023;13(12):1009. <https://doi.org/10.3390/bs13121009>
7. Baik C, Larcombe W, Brooker A. How universities can enhance student mental wellbeing: the student perspective. *High Educ Res Dev*. 2019;38(4):674–87. <https://doi.org/10.1080/07294360.2019.1576596>
8. Sining M, Sharaai AH, Wafa W. A study of social well-being among university students. *Int J Life Cycle Assess*. 2022;27(3):492–504. <https://doi.org/10.1007/s11367-022-02029-w>
9. Berdida DJE, Lopez V, Grande RAN. Nursing students' perceived stress, social support, self-efficacy, resilience, mindfulness and psychological well-being: a structural equation model. *Int J Ment Health Nurs*. 2023;32(5):1390–404. <https://doi.org/10.1111/inm.13179>
10. Malinauskas R, Malinauskiene V. The relationship between emotional intelligence and psychological well-being among male university students: the mediating role of perceived social support and perceived stress. *Int J Environ Res Public Health*. 2020;17(5):1605. <https://doi.org/10.3390/ijerph17051605>
11. Anjum R. Role of hardiness and social support in psychological well-being among university students. *MIER J Educ Stud Trends Pract*. 2022;89–102. <http://doi.org/10.52634/mier/2022/v12/i1/2172>
12. Lee D, Ng PM, Bogomolova S. The impact of university brand identification and eWOM behaviour on students' psychological well-being: a multi-group analysis among active and passive social media users. *J Mark Manag*. 2020;36(3–4):384–403. <https://doi.org/10.1080/0267257X.2019.1702082>
13. Hafidh AA, Septiariini E. The influence of university brand identification, positive electronic word of mouth (e-WOM) behavior, and university life satisfaction on students' psychological well-being. *Eqien J Ekon Bisnis*. 2022;11(1):287–95. <https://doi.org/10.34308/eqien.v11i1.776>
14. Tajfel H, Turner JC. The social identity theory of intergroup behavior. In: Worchel S, Austin LW, editors. *Psychology of intergroup relations*. Chicago: Nelson-Hall; 1986. pp. 7–24.
15. Mael F, Ashforth BE. Alumni and their alma mater: a partial test of the reformulated model of organizational identification. *J Organ Behav*. 1992;13(2):103–23. <https://doi.org/10.1002/job.4030130202>
16. Casidy R, Wymer W. The impact of brand strength on satisfaction, loyalty and WOM: an empirical examination in the higher education sector. *J Brand Manag*. 2015;22:117–35. <https://doi.org/10.1057/bm.2015.6>
17. Soutter AK, O'Steen B, Gilmore A. The student well-being model: a conceptual framework for the development of student well-being indicators. *Int J Adolesc Youth*. 2014;19(4):496–520. <https://doi.org/10.1080/02673843.2012.754362>
18. Yi S, Zhang Y, Lu Y, Shadiev R. Sense of belonging, academic self-efficacy and hardiness: their impacts on student engagement in distance learning courses. *Br J Educ Technol*. 2024;55(4):1703–27. <https://doi.org/10.1111/bjet.13421>
19. Larsen A, James T. A sense of belonging in Australian higher education: the significance of self-efficacy and the student-educator relationship. *J Univ Teach Learn Pract*. 2022;19(4):1–15.
20. Hako AN, Mbongo EN. Psychological well-being of students in higher education institutions: a theoretical review. *Ment Health Crisis High Educ*. 2024;226–46. <https://doi.org/10.4018/979-8-3693-2833-0.ch013>
21. Teeroovengadam V, Ringle CM, Nunkoo R, Coates H. Quality of higher education experience, satisfaction, and well-being: genuinely caring for our students-consumers. *J Mark High Educ*. 2023;1–23. <https://doi.org/10.1080/08841241.2022.2152918>
22. Wilkins S, Butt MM, Kratochvil D, Balakrishnan MS. The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Stud High Educ*. 2016;41(12):2232–52. <https://doi.org/10.1080/03075079.2015.1034258>
23. Wakefield JR, Sani F, Herrera M. Greater university identification—but not greater contact—leads to more life satisfaction: evidence from a Spanish longitudinal study. *Appl Psychol Health Well-Being*. 2018;10(2):330–44. <https://doi.org/10.1111/aphw.12125>
24. Strayhorn TL. *College students' sense of belonging: a key to educational success for all students*. 2nd ed. Routledge; 2018. <https://doi.org/10.4324/9781315297293>
25. Alexandrov A, Lilly B, Babakus E. The effects of social- and self-motives on the intentions to share positive and negative word of mouth. *J Acad Mark Sci*. 2013;41(5):531–46. <https://doi.org/10.1007/s11747-012-0323-4>
26. Rabah HA, Dandis AO, Eid MAH, Tiu Wright L, Mansour A, Mukattash IL. Factors influencing electronic word of mouth behavior in higher education institutions. *J Mark Commun*. 2023;1–25. <https://doi.org/10.1080/13527266.2023.2201605>
27. Hacettepe University. Department of Social Work History. 2024. Available from: <https://sh.hacettepe.edu.tr/tr/menu/tarihce-210>
28. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *J Pers Soc Psychol*. 1989;57(6):1069–81. <https://doi.org/10.1037/0022-3514.57.6.1069>
29. Ryff CD, Keyes CLM. The structure of psychological well-being revisited. *J Pers Soc Psychol*. 1995;69(4):719–27. <https://doi.org/10.1037/0022-3514.69.4.719>
30. Sharma S, Sharma M. Self, social identity and psychological well-being. *Psychol Stud*. 2010;55:118–36. <https://doi.org/10.1007/s12646-010-0011-8>
31. Steele CM. The psychology of self-affirmation: sustaining the integrity of the self. In: Berkowitz L, editor. *Advances in experimental social psychology*. Volume 21. New York: Academic; 1988. pp. 261–302.
32. Tajfel H. Social categorization, social identity and social comparison. In: Tajfel H, editor. *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press; 1978. p. 61–76.
33. Sherman DK, Cohen GL. The psychology of self-defense: self-affirmation theory. *Adv Exp Soc Psychol*. 2006;38:183–242. [https://doi.org/10.1016/S0065-2601\(06\)38004-5](https://doi.org/10.1016/S0065-2601(06)38004-5)
34. Sherman DK. Self-affirmation: understanding the effects. *Soc Personal Psychol Compass*. 2013;7(11):834–45. <https://doi.org/10.1111/spc3.12072>
35. Nelson SK, Fuller JA, Choi I, Lyubomirsky S. Beyond self-protection: self-affirmation benefits hedonic and eudaimonic well-being. *Pers Soc Psychol Bull*. 2014;40(8):998–1011. <https://doi.org/10.1177/0146167214533389>
36. Howell AJ. Self-affirmation theory and the science of well-being. *J Happiness Stud*. 2017;18(1):293–311. <https://doi.org/10.1007/s10902-016-9713-5>
37. Kotler P, Keller KL. *Marketing management*. 15th ed. Pearson Education; 2016.
38. File KM, Prince RA. Positive word-of-mouth: customer satisfaction and buyer behaviour. *Int J Bank Mark*. 1992;10(1):25–9. <https://doi.org/10.1108/02652329210007867>
39. Mittal S, Gupta V, Motiani M. Examining the linkages between employee brand love, affective commitment, positive word-of-mouth, and turnover intentions: a social identity theory perspective. *IIMB Manag Rev*. 2022;34(1):7–17. <https://doi.org/10.1016/j.iimb.2022.04.002>
40. Markovic S, Iglesias O, Singh JJ, Sierra V. How does the perceived ethicality of corporate services brands influence loyalty and positive word-of-mouth? Analyzing the roles of empathy, affective commitment, and perceived quality. *J Bus Ethics*. 2018;148(1):721–40. <https://doi.org/10.1007/s10551-015-2985-6>
41. Ranaweera C, Prabhu J. On the relative importance of customer satisfaction and trust as determinants of customer retention and positive word of mouth. *J Target Meas Anal Mark*. 2003;12(1):82–90. <https://doi.org/10.1057/palgrave.jt.5740100>
42. Wang X, Binti Omar NA. Nexus between brand love, loyalty, affective commitment and positive word of mouth: in the context of social identity theory. *Sustainability*. 2023;15(4):3813. <https://doi.org/10.3390/su15043813>
43. Wojnicki AC, Godes D. Word-of-mouth as self-enhancement. *HBS Mark Res Pap*. 2008;06–01. <https://doi.org/10.2139/ssrn.908999>
44. Belk RW. Possessions and the extended self. *J Consum Res*. 1988;15(2):139–68. <https://doi.org/10.1086/209154>
45. Escalas JE, Bettman JR. Self-construal, reference groups, and brand meaning. *J Consum Res*. 2005;32(3):378–89. <https://doi.org/10.1086/497549>
46. Senior DS. The moderating effect of corporate volunteerism on reactions to organizational change: a self-affirmation analysis. New York: Columbia University; 2006.
47. Balaji MS, Roy SK, Sadeque S. Antecedents and consequences of university brand identification. *J Bus Res*. 2016;69(8):3023–32. <https://doi.org/10.1016/j.jbusres.2016.01.017>
48. Scheepers D, Ellemers N. Social identity theory. In: *Social Psychology in Action: Evidence-Based Interventions from Theory to Practice*. 2019:129–143. https://doi.org/10.1007/978-3-030-13788-5_9
49. Guan M, So J. Social identity theory. In: *The International Encyclopedia of Health Communication*. 2022:1–5. <https://doi.org/10.1002/9781119678816.1e160667>
50. Buyukdag N, Kitapci O. Antecedents of consumer-brand identification in terms of belonging brands. *J Retail Consum Serv*. 2021;59(1):102420.
51. Bergami M, Bagozzi RP. Self-categorization, affective commitment and group self-esteem as distinct aspects of social identity in the organization. *Br J Soc Psychol*. 2000;39(4):555–77. <https://doi.org/10.1348/014466600164633>

52. Stephenson LA, Yerger DB. Optimizing engagement: brand identification and alumni donation behaviors. *Int J Educ Manag.* 2014;28(6):765–78. <https://doi.org/10.1108/IJEM-04-2013-0057>
53. Hett F, Mechtel M, Kröll M. The structure and behavioral effects of revealed social identity preferences. *Econ J.* 2020;130(632):2569–95. <https://doi.org/10.1093/ej/ueaa055>
54. Chu SC, Lien CH, Cao Y. Electronic word-of-mouth (eWOM) on WeChat: examining the influence of sense of belonging, need for self-enhancement, and consumer engagement on Chinese travellers' eWOM. *Int J Advert.* 2019;38(1):26–49. <https://doi.org/10.1080/02650487.2018.1470917>
55. Parahoo SK, Harvey HL, Tamim RM. Factors influencing student satisfaction in universities in the Gulf region: does gender of students matter? *J Mark High Educ.* 2013;23(2):135–54. <https://doi.org/10.1080/08841241.2013.860940>
56. Casidy R. Linking brand orientation with service quality, satisfaction, and positive word-of-mouth: evidence from the higher education sector. *J Nonprofit Public Sect Mark.* 2014;26(2):142–61. <https://doi.org/10.1080/10495142.2014.901004>
57. Al Balushi MK, Hussain K, Al Mahrouqi AN. Strategic university positioning: fostering student satisfaction and well-being. *Curr Psychol.* 2024;1–13. <https://doi.org/10.1007/s12144-024-06104-3>
58. Rehman MA, Woyo E, Akahome JE, Sohail MD. The influence of course experience, satisfaction, and loyalty. *J Educ Mark.* 2024;22(1):67–84. <https://doi.org/10.1080/08841241.2020.1852469>
59. Schlesinger W, Cervera-Taulet A, Wymer W. The influence of university brand image, satisfaction, and university identification on alumni WOM intentions. *J Mark High Educ.* 2023;33(1):1–19. <https://doi.org/10.1080/08841241.2021.1874588>
60. Nguyen LTK, Lin TMY, Lam HP. The role of co-creating value and its outcomes in higher education marketing. *Sustainability.* 2021;13(13):6724. <https://doi.org/10.3390/su13126724>
61. Brown TJ, Barry TE, Dacin PA, Gunst RF. Spreading the word: investigating antecedents of consumers' positive word-of-mouth intentions and behaviors. *J Acad Mark Sci.* 2005;33(2):123–38. <https://doi.org/10.1177/0092070304268417>
62. Dawes J. Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *Int J Mark Res.* 2008;50(1):61–104. <https://doi.org/10.1177/147078530805000106>
63. Clarke PJ, Marshall VW, Ryff CD, Wheaton B. Measuring psychological well-being in the Canadian study of health and aging. *Int Psychogeriatr.* 2001;13(5):79–90. <https://doi.org/10.1017/S1041610202008013>
64. Tabachnick BG, Fidell LS, Ullman JB. Using multivariate statistics. 6th ed. Boston, MA: Pearson; 2013.
65. Anderson JC, Gerbing DW. Structural equation modeling in practice: a review and recommended two-step approach. *Psychol Bull.* 1988;103(3):411.
66. Bagozzi RP, Yi Y. On the evaluation of structural equation models. *J Acad Mark Sci.* 1988;16:74–94.
67. Ursachi G, Horodnic IA, Zait A. How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Econ Finance.* 2015;20:679–86. [https://doi.org/10.1016/S2212-5671\(15\)00123-9](https://doi.org/10.1016/S2212-5671(15)00123-9)
68. Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. *J Mark Res.* 1981;18(1):39–50. <https://doi.org/10.1177/002224378101800104>
69. Gefen D, Straub D, Boudreau MC. Structural equation modeling and regression: guidelines for research practice. *Commun Assoc Inf Syst.* 2000;4(1):7.
70. Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav Res Methods.* 2008;40(3):879–91. <https://doi.org/10.3758/BRM.40.3.879>
71. Sicilia M, Delgado-Ballester E, Palazon M. The need to belong and self-disclosure in positive word-of-mouth behaviours: the moderating effect of self-brand connection. *J Consum Behav.* 2016;15(1):60–71. <https://doi.org/10.1002/cb.1533>
72. D'Uggento AM, Petruzzellis L, Piper L, Gurrieri AR. In the name of the university: the choice to promote as a tool to influence decision-making. *Qual Quant.* 2023;57(4):3151–64. <https://doi.org/10.1007/s11135-022-01475-w>
73. Demirhan G, Koçak S. The mediating role of school satisfaction in the relationship between positive experiences at school and school attachment. *Educ Policy Anal Strateg Res.* 2023;18(3):381–404. <https://doi.org/10.29329/e-pasr.2023.600.18>
74. Rasheed R, Rashid A. Role of service quality factors in word of mouth through student satisfaction. *Kybernetes.* 2024;53(9):2854–70. <https://doi.org/10.1108/K-01-2023-0119>
75. Swimberghe KR, Astakhova M, Wooldridge BR. A new dualistic approach to brand passion: harmonious and obsessive. *J Bus Res.* 2014;67(12):2657–65. <https://doi.org/10.1016/j.jbusres.2014.04.003>
76. Cicognani E, Pirini C, Keyes C, Joshanloo M, Rostami R, Nosratabadi M. Social participation, sense of community and social well-being: a study on American, Italian and Iranian university students. *Soc Indic Res.* 2008;89:97–112. <https://doi.org/10.1007/s11205-007-9222-3>
77. Vieno A, Santinello M, Pastore M, Perkins DD. Social support, sense of community in school, and self-efficacy as resources during early adolescence: an integrative model. *Am J Community Psychol.* 2007;39:177–90. <https://doi.org/10.1007/s10464-007-9095-2>
78. Abdelmaaboud AK, Peña AIP, Mahrous AA. The influence of student-university identification on student's advocacy intentions: the role of student satisfaction and student trust. *J Mark High Educ.* 2021;31(2):197–219. <https://doi.org/10.1080/08841241.2020.1768613>
79. Tessema DH, Yesilada F, Aghaei I, Ahmed JN. Influence of perceived service quality on word-of-mouth: the mediating role of brand trust and student satisfaction. *J Appl Res High Educ.* 2024;1–14. <https://doi.org/10.1108/JARH-E-06-2024-0299>
80. Hsu CL, Pan YJ, Yan QW, Yan MR. Key factors influencing word-of-mouth intentions: the case of college freshmen in Taiwan. *Meas Bus Excel.* 2021;25(1):106–18. <https://doi.org/10.1108/MBE-02-2020-0033>
81. Parks AC. The state of positive psychology in higher education: introduction to the special issue. *J Posit Psychol.* 2011;6(6):429–31. <https://doi.org/10.1080/17439760.2011.637729>

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