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TYPE: Article CC:CCG

JOURNAL TITLE: Innovative higher education

USER JOURNAL TITLE: Innovative Higher Education

ARTICLE TITLE: The Balancing Act of Passion for Teaching and for the Subject in Higher Education

ARTICLE AUTHOR:

VOLUME:

ISSUE:

MONTH:

YEAR: 2025

PAGES:

ISSN: 1573-1758

OCLC #:

Processed by RapidX: 8/12/2025 10:08:36 PM

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The Balancing Act of Passion for Teaching and for the Subject in Higher Education

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Accepted: 12 July 2025

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Abstract

This study investigates the interplay between faculty members' passion for teaching, passion for their academic discipline, and relational well-being. Utilizing a mixed-methods approach with 97 faculty members from diverse disciplines at a research-intensive university, participants were classified into three passion profiles using k-means clustering based on their levels of passion for teaching, as well as harmonious passion, and obsessive passion for their subject. Those with balanced passion for teaching and subject expertise exhibited the highest levels of relational well-being, those with low passion for both displayed reduced well-being, and those with high passion for both teaching and the subject demonstrated strong engagement but challenges with work-life balance due to overcommitment. Faculty with balanced passion exhibited the highest levels of relational well-being, whereas those with overall low passion showed reduced well-being. Those with high passion in teaching and in their subject demonstrated strong engagement but faced challenges in work-life balance due to overcommitment. Thematic analysis of qualitative responses explored how faculty expressed and enacted their passion for teaching. The findings underscore the importance of fostering a balanced passion among faculty to enhance well-being and teaching effectiveness while mitigating the risks of obsessive passion, such as burnout. Targeted professional development and institutional policies promoting the maintenance of a balanced passion are discussed to support faculty satisfaction and student outcomes.

Keywords Passion · Teaching · Research · Higher Education · Faculty · Well-Being

University professors navigate complex roles as educators, researchers, and institutional contributors, facing pressures to excel across these domains. Within this context, a growing body of research has recognized passion, defined as a strong inclination toward a valued activity that individuals love, find important, and invest significant time in (Vallerand et al., 2003), as a key driver of faculty effectiveness

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Published online: 06 August 2025

Springer

(Daumiller et al., 2020; Moè, 2016; Stupnisky et al., 2023). However, the higher education literature remains fragmented, often conflating passion for teaching with passion for one's academic discipline and treating passion as a monolithic construct without distinguishing its types, such as harmonious (fostering balance and positive outcomes) and obsessive passion (leading to strain and burnout) (Fernández-García et al., 2023; Han & Perron, 2022; Vallerand & Houliort, 2019; Yukhymenko-Lescroart & Sharma, 2019; Zhang & Tsang, 2024). This lack of clarity obscures how different forms of passion uniquely shape faculty experiences, pedagogical practices, and interpersonal relationships. Moreover, while passion is assumed to be inherently positive, emerging research highlights its potential downsides, such as burnout and strained relationships when passion tends to be more obsessive (Fernández-García et al., 2023; Vallerand, 2015).

This study addresses the gap in understanding how passion for teaching (enthusiasm for pedagogical engagement, distinct from subject matter) and passion for the academic discipline (deep commitment to research, knowledge dissemination, and disciplinary advancement) uniquely shape university faculty's professional experiences and relational well-being. By framing the study under the Dualistic Model of Passion (DMP; Vallerand et al., 2003), faculty members were classified under distinct profiles using k-means clustering and were compared based on their relational well-being (e.g., relationships with peers, students, and family). Qualitative narratives complemented the quantitative findings, capturing contextual nuances of how faculty enact passion and navigate institutional pressures, revealing both its benefits (e.g., enhanced engagement) and risks (e.g., burnout from overcommitment).

Theoretical Framework

The Dualistic Model of Passion (DMP)

Over the past two decades, interest in passion as a psychological construct has increased, with advances in several models and theories explaining the nature of passion in various contexts, including education (Vallerand, 2015). Research on passion in education has largely focused on teaching, emphasizing that passionate teachers are experts, care deeply about students, and exhibit resilience as well as a strong teaching identity (Day, 2004). According to the DMP, passionate educators would deeply commit to teaching, significantly value their role, dedicate substantial time and energy, and incorporate this role into their core self.

The DMP further postulates that there are two types of passion, obsessive (OP) and harmonious (HP), that can be distinguished in terms of how the passionate activity has been internalized. HP reflects an autonomous integration of a loved activity, harmonizing with other life domains (e.g., family, hobbies) and fostering positive outcomes like resilience, mindfulness, positive affect, and flexible persistence (Chichekian & Vallerand, 2022). For example, a faculty member with HP for teaching might design engaging, student-centered lessons because they find joy in fostering student growth, scheduling their preparation to balance with family time or personal interests, such as reading or community involvement, thereby maintaining

well-being and enthusiasm without conflict. Conversely, OP stems from external pressures, such as institutional demands for research productivity in striving universities, the quest for prestige amplifying publication expectations, and evolving student needs requiring new pedagogical skills (Vallerand, 2015). These pressures can lead to controlled internalization tied to contingencies like self-esteem or institutional validation, correlating with anxiety, burnout, and rigid persistence.

Literature Review

Passion is widely recognized in educational research as both a driver and a consequence of effective teaching, with passionate educators demonstrating dedication and sustained student engagement (Moè & Pazzaglia, 2023; Vallerand & Paquette, 2024). Numerous studies have described passionate educators as deeply committed to fostering student learning through enthusiasm (Liu et al., 2020), whereas others have explored the sustainability of such passion amidst the professional challenges these educators face (Jang et al., 2023). Further research has delineated mechanisms for nurturing passion in education, such as ongoing professional development, active engagement in communities of practice, and the cultivation of robust student–teacher relationships (Lovett, 2023; Wang et al., 2020). While these insights have significantly advanced understanding of passion in K-12 education, research on passion in higher education remains comparatively underexplored, often conflating passion with broader motivational constructs (Stupnisky & Hall, 2024). This limitation likely stems from assumptions that university faculty inherently possess high levels of passion and motivation, overlooking the unique demands of balancing teaching, research, and service roles in academia (Daumiller et al., 2020, 2023).

Passion for Teaching

Passion is seen as integral to teachers' professional identity, particularly during peak stress periods, as it enhances job satisfaction, resilience, and relational well-being through positive interactions with students and colleagues (Vallerand, 2015). Past research has shown how passion for teaching is linked to increased student motivation, engagement, and academic performance, as faculty enthusiasm has been shown to transmit positive emotions to students (Frenzel et al., 2009; Moè, 2016). In contrast, research about passion for the academic discipline has often been associated with autonomous motivation (valuing and enjoying research) and positively linked to productivity and scholarly success (Stupnisky et al., 2023). However, studies rarely differentiate passion types, limiting insights into their unique contributions to faculty identity and effectiveness (Fernández-García et al., 2023; Vallerand, 2015; Yukhymenko-Lescroart & Sharma, 2019). For example, at research-intensive universities, external pressures such as heightened research expectations and changing student demands may foster OP, particularly among early-career faculty navigating tenure requirements (Daumiller et al., 2020). This may lead to potential drawbacks such as stress, work-life conflict, and strained relationship, risking professional and personal imbalance (Stupnisky et al.,

2019). Additionally, recent increases in faculty burnout, intensified by COVID-19 demands, underscore the need to examine how OP may exacerbate stress and relational strain (Fernández-García et al., 2023). This also includes the risk of overwork, especially how the cultural imperative in academia to “do what you love” risks exploiting faculty’s passion for teaching under suboptimal working conditions, especially among adjunct or early-career faculty (Heffernan & Smithers, 2024).

Relational well-being. Forming strong social connections with others and having positive interpersonal relationships is critical in higher education’s social ecosystem. Faculty members who are highly passionate about teaching often create a positive and energetic work environment, enhancing community and teamwork by supporting and mentoring their peers (Liu et al., 2020; Moè & Pazzaglia, 2023; Vallerand & Paquette, 2024). Conversely, those with lower levels of passion may contribute to a less vibrant atmosphere, reducing collaboration and potentially isolating themselves, which can weaken team dynamics. Specifically, obsessive passion can harm relationships, as faculty with OP may prioritize work excessively, reducing the quality of personal and professional connections and increasing burnout risk (Heffernan & Smithers, 2024; Vallerand et al., 2024). Harmonious passion, conversely, supports balanced relationships and empathy toward students’ needs (Moè, 2016).

The type of passion that teachers display for their subjects also significantly impacts their interpersonal relationships both within and outside the workplace. Teachers with OP toward their subject often face work-life imbalances, prioritizing work at the expense of personal relationships, leading to conflicts and reducing the quality of social interactions outside of work (Yukhymenko-Lescroart & Sharma, 2018). Their intense focus on subject matter expertise may foster competitiveness, increasing stress and reducing empathy toward colleagues. Moreover, teachers driven by OP may set unrealistic standards for themselves and their students, leading to frustration when these standards are not met. Conversely, teachers driven by HP typically maintain a healthier work-life balance, nurturing relationships both professionally and personally, and adopting a more empathetic approach to their students’ needs (Moè, 2016). These teachers serve as role models, demonstrating how to engage passionately with a subject while maintaining healthy boundaries.

These insights underscore the complexity of understanding passion in higher education. Despite its importance, the interpersonal impact of passion remains underexamined, particularly how distinct passion profiles influence relational outcomes. Therefore, further research is necessary to explore the roles of HP and OP in both teaching and disciplinary activities among university professors, how these passions are enacted at the university level, and how variations in passion shape relational well-being. The latter could be especially informative when examining faculty dynamics, institutional culture, and strategies to enhance well-being and student success (Bélanger & Ratelle, 2023; Howard & Hoffman, 2023).

The Present Study

Although prior research has recognized passion as influential within educational contexts, substantial gaps persist in the literature, particularly regarding its specific implications for university faculty. First, as mentioned previously, existing studies often treat passion for teaching and disciplinary passion as a single construct. This oversimplification obscures how each type uniquely shapes pedagogical practices, faculty engagement, and well-being (Yukhymenko-Lescroart & Sharma, 2021). For instance, passion for teaching may enhance classroom dynamics, while disciplinary passion could drive research productivity, yet their interplay or impact on faculty outcomes remains underexplored. Second, there is a methodological gap, as very limited studies employ integrative mixed-methods designs or empirical clustering approaches to systematically classify passion profiles among faculty members. Recent work highlights the value of person-centered analyses, such as latent profile analysis, in capturing heterogeneity in motivation (Howard & Hoffman, 2023), but such approaches are rarely applied to faculty passion. This limits the development of actionable, evidence-based interventions to foster faculty effectiveness and satisfaction. Third, the interpersonal consequences of passion (e.g., impact of faculty relationships with peers, students, and family) remain underexamined. Emerging research suggests that obsessive passion may strain relational well-being by fostering work-life conflict (Bélanger & Ratelle, 2023), yet comprehensive studies in academic contexts are sparse. This relational dimension is critical, given higher education's inherently collaborative nature.

Exploring passion within academia is vital due to the unique pressures university professors face, balancing rigorous research demands with teaching and service responsibilities. Culturally, passion also varies: Western-centric conceptualizations, emphasizing individual expression and personal fulfillment, often contrast with collectivist interpretations prevalent in non-Western contexts, where passion may prioritize community-oriented goals (Liu et al., 2020). For instance, East Asian faculty may align passion with institutional goals, differing from the West (Shin & Kim, 2023; Tsui & Cheng, 1999) whose faculty's expression of passion have more of a personal orientation and are at times linked with negative outcomes, including burnout, stress, and compromised relational well-being (Daumiller et al., 2022; Vallerand et al., 2024). These findings underscore the need for nuanced frameworks to support sustainable faculty engagement.

Research Framework and Questions

The present study, guided by the Dualistic Model of Passion (DMP; Vallerand et al., 2003), addresses the identified gaps by adopting a mixed-methods approach (Creswell & Plano, 2018) to: (1) classify faculty into passion profiles based on passion for teaching as well as harmonious and obsessive passion for

their subject, (2) explore how these profiles are enacted in faculty narratives, and (3) how they are associated to relational outcomes. While the DMP provides a well-validated framework for studying passion in Western educational contexts (Stupnisky et al., 2023; Vallerand, 2015), we explicitly acknowledge its roots in individualistic assumptions (e.g., passion as self-defining, autonomous internalization) and the criticism about its universal applicability. To mitigate potential bias, we test the model's assumptions against faculty narratives, allowing participants' lived experiences to challenge or refine its theoretical propositions.

RQ1. What are the distinct passion profiles for teaching and their academic discipline among university faculty?

Building on the DMP, we hypothesize that both types of passion could coexist in varying degrees (Vallerand, 2015) and that faculty will exhibit heterogeneous profiles (e.g., high HP for teaching, high OP for the discipline) reflecting varying internalization patterns. For instance, some faculty might autonomously value both teaching and their academic subject, balancing them without conflict, whereas others might feel compelled to teach due to institutional demands or personal validation needs (OP), while showing minimal engagement with their subject through research. This could be especially true for early-career faculty who might exhibit OP for disciplinary work due to publication pressures, while tenured faculty might show HP for teaching, reflecting greater autonomy.

RQ2. How do faculty members express and enact their passion for teaching?

Prior work in Western contexts indicates that teachers who are deeply passionate about their work often view teaching not just as a job, but as a pivotal part of their identity and self-concept (Moè, 2016). Based on the latter and drawing on the Dualistic Model of Passion (DMP; Vallerand, 2015), we hypothesize that faculty will describe their passion for teaching as a dedication to student success and as part of their professional identity and enact it through distinct behaviors. Moreover, building on Frenzel et al. (2009), we hypothesize that faculty would refer to student-centered pedagogical strategies (e.g., dynamic lesson design, mentorship) to enact their passion for teaching. Given that the DMP posits for two types of passion (Vallerand, 2015), we also hypothesize that faculty would describe the enactment of their passion for teaching through distinct behavioral patterns reflective of their internalization type (e.g., maintaining boundaries to avoid overcommitment vs. sacrificing personal time to meet self-imposed ideals or institutional expectations). By exploring faculty narratives, this study aims to contextualize the passion profiles identified in RQ1 and inform the relational outcomes examined in RQ3.

RQ3. How are distinct passion profiles among faculty members associated with their relational well-being?

The traditional academic emphasis on research often overshadows teaching, relegating it to a secondary status. However, the growing recognition of effective teaching's significance in higher education suggests that passionate faculty members tend to empathize deeply with students' needs. Based on the DMP, it was hypothesized that profiles dominated by HP will correlate with positive relational well-being with peers, students and family members, while OP-dominated profiles may associate with strained relationships, reduced social interactions, and burnout risk (Moè, 2016; Vallerand et al., 2024).

The three research questions are interconnected, with each building on the others to provide a comprehensive understanding of faculty passion. RQ1's quantitative classification of passion profiles establishes the foundation, while RQ2's qualitative narratives offer contextual depth, highlighting how faculty experience and enact their passion across teaching and disciplinary work. These narratives, in turn, inform RQ3 by providing insights into how passion profiles shape relational well-being, enabling a nuanced interpretation of quantitative outcomes. This integrated approach ensures that the study captures both the heterogeneity of faculty passion and its multifaceted implications.

Methods

Participants and Procedures

Participants were recruited from a [Blinded for review] university using a snow-ball sampling method. Department chairs across various faculties were contacted via email and invited to disseminate a study invitation to faculty members within their units. While no formal definition of passion was provided, the tone and content of the message emphasized interest in faculty members' passion for teaching, emotional experiences while teaching, and classroom behaviors. Chairs were not explicitly asked to identify "passionate" or "effective" teachers, but the invitation implicitly encouraged participation from faculty who felt invested in the affective and motivational dimensions of their teaching roles. Faculty members who received the message could then self-select to participate by completing a 15–20 min online questionnaire.

The study was conducted at a mid-sized, public research university in Eastern Canada with a strong emphasis on both teaching and research. The University enrolls over 32,250 students annually across its various undergraduate and graduate programs, including 46 undergraduate, 48 master's, and 27 doctoral degrees. This enrollment positions it as mid-sized relative to Canadian research universities, where large institutions exceed 90,000 students, and smaller ones have under 10,000 (Universities Canada, 2024). The university is also recognized for its robust research activities, encompassing 61 research chairs in fields such as pharmacology, micro-electronics, statistical learning, and environmental studies. The university also hosts a diverse international community, with more than 3,500 students from 98 countries. Tenure and promotion criteria prioritize research productivity (e.g., publications, grants) but also value teaching effectiveness, as evidenced by student evaluations and peer reviews. Faculty face expectations to balance teaching, research, contribution to university, and service, with teaching loads typically ranging from two to four courses per semester.

The sample included a total of 97 faculty members (43 males, 54 females) with various teaching experience: less than 1 year ($n=8$), 1–5 years ($n=11$), 5–10 years ($n=16$), and over 10 years ($n=64$). They also taught across diverse fields: social sciences ($n=29$), education ($n=42$), and STEM ($n=28$). The [Blinded for review] Ethics

Committee approved this study under project number [Blinded for review], adhering to ethical guidelines.

Measures

The survey questions utilized a Likert-type scale ranging from 1 (do not agree at all) to 7 (absolutely agree), unless specified otherwise.

Faculty Passion for the Subject. Passion was measured using 12 items from the Dualistic Model of Passion (DMP) scale (Vallerand & Paquette, 2024), with six items assessing Harmonious Passion (HP) (e.g., 'This subject is in harmony with my other interests', $\alpha=0.75$, $\omega=0.76$) and six assessing Obsessive Passion (OP) (e.g., 'I have difficulties disengaging from my subject', $\alpha=0.82$, $\omega=0.82$). The DMP framework has been validated across various languages and shown to be consistent across gender, culture, and type of activity (Marsh et al., 2013), demonstrating robust internal consistency and supporting evidence of predictive, discriminant, construct, and external validity.

Passion for Teaching: This construct was measured using six modified items from the Entrepreneurial Passion Scale (Cardon et al., 2009), adapted for the teaching context ($\alpha=0.72$, $\omega=0.72$). Items measured enjoyment in the teaching process (e.g., 'I am really pleased about my teaching profession', 'I like exchanging with my students regarding topics related to my teaching').

Quality of Interpersonal Relations: This outcome was assessed using selected and adapted items from the Quality of Interpersonal Relations scale (Senécal et al., 1992), which measured the relationship quality that faculty maintained with their peers at work (Rel_P) and with their family members (Rel_F). Reliability for these measures was not assessed as items were used as individual outcome variables.

Social Support: The social support provided to students (SS) was measured using five items from the Social Support Questionnaire (Malecki & Demary, 2002; e.g., 'I care about my students', 'I listen to my students when they feel upset', $\alpha=0.72$, $\omega=0.70$).

Additionally, two open-ended questions were included in the survey to enrich the interpretation of the quantitative results and gather insights on faculty members' self-perception of their passion and its demonstration in their professional behavior: "How would you describe the extent to which you consider yourself or feel passionate about teaching?" and "How do you display your passion when you teach?" The two open-ended questions elicited 194 responses from 97 participants. Responses ranged from 1–2 sentences to short paragraphs (approximately 20–150 words), with an average length of 3–5 sentences, yielding a total of ~6,500 words. These data were analyzed thematically to complement the quantitative findings, providing contextual insights into faculty passion profiles and their relational outcomes.

Data Analysis

To explore how faculty members conceptualize and display their passion for their profession, a bottom-up thematic analysis was employed. Initially, responses from survey short-answer questions were imported into NVivo. The data were carefully read to understand the context, familiarize with the content, and identify emergent patterns. Open coding was initiated by a research professional who labeled text segments with preliminary codes that captured their perceived meanings. Codes were then grouped into categories to manage the complexity of the data. A second experienced coder joined to ensure a rigorous analysis, during which codes were merged, split, or refined as necessary. This iterative process continued until data saturation was achieved, with both coders agreeing on the categories. They regularly compared codes and categories to refine them and discussed any disagreements to reach consensus. Ultimately, overarching themes were derived from these categories to capture the broader patterns necessary for understanding the phenomenon and forming a cohesive theoretical narrative.

To assess the impact of passion on faculty members' relational well-being, following a K-means clustering with variables including passion for teaching (PTEACH), and both obsessive (OP) and harmonious (HP) passion for the subject was used, a one-way ANOVA was conducted to determine statistically significant differences in relational well-being across clusters followed by post-hoc tests to identify which clusters differed significantly. The Elbow Method determined the optimal number of clusters, acknowledging that the assumption of spherical and equally sized clusters in K-means might compromise the effectiveness of the clustering. Based on the Dualistic Model of Passion advocating two distinct types of passion, harmonious and obsessive, and the Quadripartite Approach to the Dualistic Model of Passion (Schellenberg et al., 2019), which offers a nuanced differentiation of four passion subtypes: pure HP (high HP with low OP), pure OP (low HP with high OP), mixed passion (high in both HP and OP), and non-passion (low in both), a two to four-cluster solution was anticipated.

Results

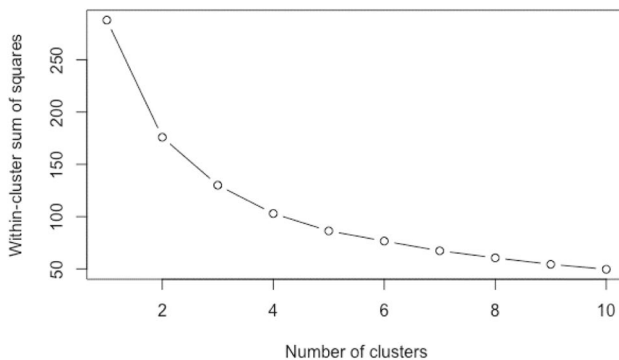
All variables were examined for accuracy of data entry and fit between their distributions and the assumptions underlying maximum likelihood procedures. A thorough examination for outliers, an assessment of descriptive statistics, and an exploration of the correlations among the studied variables were performed. Potential outliers ($n=2$) were identified by visually inspecting Mahalanobis distance scores obtained from the multivariate regression analysis in R. Results from analyses that excluded these potential outliers ($n=97$) deviated from those that included the full sample ($n=99$); therefore, we decided to exclude the two outliers from the analysis to ensure a more robust analysis and reduce the potential impact of extreme values on the results and conclusion.

Table 1 Descriptive statistics and correlation for study variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. HP ^a	5.96	0.67	-					
2. OP ^b	3.59	1.23	.34***	-				
3. PTEACH ^c	6.47	0.49	.42***	.27**	-			
4. Rel_P ^d	5.92	1.29	.36***	.15	.29**	-		
5. Rel_F ^e	6.51	0.63	.22*	.16	.28**	.28**	-	
6. SS ^f	6.22	0.52	.47***	.19	.57***	.18	.16	-

Note. N=97. ^a HP=Harmonious passion for the subject. ^b OP=Obsessive passion for the subject. ^c PTEACH=Passion for teaching. ^d Rel_P=Relationship with peers. ^e Rel_F=Relationship with family. ^f SS=Social support

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

**Fig. 1** Elbow Method for Optimal Number of Clusters

The mean (*M*) and standard deviation (*SD*) were calculated for the study variables, as well as Pearson's correlation coefficient to explore the relationships between the variables of interest (Table 1).

A K-means clustering approach was used to assess the extent to which passion for teaching (PTEACH) and the subject (HP & OP) differentiated faculty members' passion for academia and their relational well-being. As a general guideline, it is suggested to have approximately 10 times more observations than variables to perform a cluster analysis; our sample size of $n=97$ is, therefore, sufficient to pursue k-means clustering with the three variables. An Elbow Method graph was generated to determine the optimal number of clusters by plotting the within-cluster sum of squares against the number of clusters ranging from 1 to 10 (Fig. 1).

The elbow point of the graph clusters was not distinctly pronounced, suggesting that two to four clusters might represent a reasonable partition of the data. While a two-cluster solution appears simpler and easier to interpret, providing a clear dichotomy or separation in the data, fewer clusters might also oversimplify the underlying structure, potentially missing important nuances or subgroups that

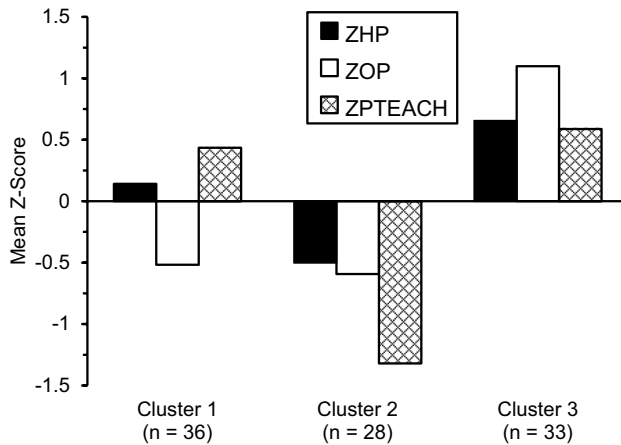


Fig. 2 Three-Cluster Solution. ZHP=z-score of harmonious passion for the subject. ZOP=z-score of obsessive passion for the subject. ZPTEACH=z-score of passion for teaching

a three or four-cluster solution could reveal. Given these limitations in capturing the diversity or complexity of the dataset, three and four-cluster solutions were considered for further analysis.

Considering the elbow point and theoretical underpinnings from the Dualistic Model of Passion (DMP) by Vallerand and Paquette (2024) and the quadripartite approach to passion by Schellenberg et al. (2019), a K-means clustering algorithm was conducted using the mean values of z-scores of HP, OP, and Passion for Teaching (PTEACH), specifying four clusters in the dataset. This was followed by a silhouette analysis to evaluate the cohesion and separation of the clusters.

The silhouette plot revealed an average silhouette width of 0.324, indicating a moderate structure of the clusters. Clusters 2 ($n=28$, silhouette=0.397) and 4 ($n=35$, silhouette=0.405) displayed higher than average silhouette scores, suggesting that data points in these clusters were well matched to their own clusters and distinct from other clusters. Cluster 3 ($n=20$, silhouette=0.299) had a moderately positive silhouette score, while Cluster 1 ($n=14$, silhouette=0.205) had the lowest average silhouette score. This cluster also had the most points falling below the average silhouette score line, indicating that participants might be on the border between two clusters or poorly fitted to their current cluster. Overall, the average silhouette score indicated that while there is some structure to the clustering, the separation between some of them was not strongly pronounced. Consequently, a K-means cluster analysis was conducted with three clusters, resulting in a better fit.

The clusters in the three-cluster solution were primarily differentiated based on OP and HP, with a less pronounced contribution from PTEACH (Fig. 2). The overall average silhouette score across all clusters was approximately 0.336 ($C1=0.410$, $C2=0.320$, $C3=0.279$), suggesting a marginal improvement compared to the four-cluster solution, with a more balanced sample size among the three clusters.

Identifying Passion Profiles

To explore distinct passion profiles among university faculty, a k-means cluster analysis was conducted using standardized scores of harmonious passion (ZHP), obsessive passion (ZOP), and passion for teaching (ZPTEACH). A three-cluster solution was determined to provide the most theoretically meaningful and interpretable classification of faculty members' passion orientations (see Fig. 2).

Cluster 1 (Balanced Passion, $n = 35$) consisted of faculty who reported high levels of passion for teaching and moderate levels of harmonious passion for their subject, alongside relatively low levels of obsessive passion. This cluster reflected a balanced profile, where teaching enthusiasm was central and discipline-related passion remained well-regulated. Participants taught mostly at the graduate level (65.7%) and the majority were from the Social Sciences ($n = 11$) and Education ($n = 18$) domains, and $n = 6$ from STEM. The sample was predominantly composed of female professors ($n = 22$, 63% of 35), 54% had been teaching for over 10 years, and 17% had received an award related to teaching or mentorship or program development.

Cluster 2 (Low Passion, $n = 28$) included faculty characterized by low levels across all three variables, indicating a more disengaged profile. These individuals expressed neither strong teaching passion nor strong disciplinary identification, suggesting potential risks for low motivation due to diminished passion engagement. This sample was composed of $n = 17$ male and $n = 11$ female professors that taught mostly at the graduate levels (78.6%). Over two-thirds (68%) had been teaching for at least 10 years and 36% were teaching award recipients. This sample taught mostly in the STEM domain (47%), and a relatively lower percentage taught in the Social Sciences (32%) and Education (21%).

Cluster 3 (Dual Passion, $n = 34$) included faculty members who exhibited high levels of passion for teaching, high HP for their subject, and elevated levels of OP. This profile reflected an intense passion orientation, marked by dual engagement but also potential vulnerability to overcommitment and relational strain. The sample was composed of $n = 13$ male and $n = 21$ female professors of which 26% taught in the Social Sciences, 26% in Education, and 48% in STEM. Similar to clusters 1 and 2, the vast majority (88%) taught at the graduate level and had over 10 years of teaching experience (74%). Nearly half of the participants in this cluster (44%) had received a teaching-related award.

Faculty Members' Descriptions of Their Passion

In response to how university faculty members described their passion for their profession, participants shared insights related to two types of passion: their passion for teaching and a more general passion for their subject.

Faculty Members' Passion for Teaching

Appreciation for the Act of Teaching (n = 23 participants): Faculty members often describe their enthusiasm for teaching as an expression of passion that transcends specific subject matter. For example, one participant noted, "For me, teaching and the academic subject are two distinct things. I am passionate about teaching; I could probably teach cooking and enjoy it. I am interested in different research objects that enrich my teaching on various aspects" (Participant TkEPV, Faculty of Education, Cluster 1). Another stated, "My passion is for teaching, not necessarily for the teachable subject" (Participant quKgK, Faculty of Sciences, Cluster 1). This theme underscores how participants distinguish their love for pedagogical activities from their research interests, often experiencing profound joy and fulfillment in the teaching process itself.

Supporting Students (n = 38 participants): Participants also reported great joy in contributing to students' progress and development. "I derive immense pleasure from helping my students advance and seeing their learning evolve. Above all, I'm passionate about human interaction, supporting others, and the resultant learning" (Participant OO7dq, Faculty of Education, Cluster 2). Another faculty member emphasized, "For me, passion fundamentally lies in the learning process. It's about creating interactive, reflective, and co-constructed learning spaces with learners" (Participant 1v5oV, Faculty of Liberal Arts and Science, Cluster 1).

Time and Energy Invested in Teaching (n = 23 participants): Many professors also spoke of the substantial time and energy they invest in teaching. "I consider myself a passionate teacher, dedicating more than 40 h a week to ensure my classes are well-organized, interesting, and stimulating. My commitment to my graduate students is limitless, often at the expense of my personal time and leisure" (Participant RcZqz, Faculty of Health Sciences, Cluster 3). This subtheme highlights the lengths to which faculty members go to support their students, often exceeding their official duties.

Faculty Members' Passion for the Subject

Love for the Subject (n = 13 participants): When discussing their passion, some faculty members expressed a deep-seated love for their academic disciplines, which they view as integral to their professional engagement. "I am very passionate about my subject, always eager to guide the next generation in this field" (Participant 4DORM, Faculty of Health Sciences, Cluster 3).

Time and Energy Invested in Contributing to the Subject (n = 11 participants): Similar to their dedication to teaching, these faculty members also go beyond their teaching responsibilities in their contributions to their respective fields. "I demonstrate my passion by sharing up-to-date knowledge, engaging with contemporary issues, and actively participating in community events related to my field. My work is characterized by innovative and exciting approaches to the discipline" (Participant dp7ny, Faculty of Health Sciences, Cluster 2). Faculty members also mentioned

their enthusiastic involvement in related organizations and multiple projects or publications.

Sharing the Love for the Subject with Students (n=3 participants): The final aspect of how participants enacted their passion for their subjects involved their deliberate efforts to inspire their students. "I strive to convey my enthusiasm and interest in the subject through interactive methods like exercises and games. I'm always thrilled to stand before a class and share this passion, which I've been told is contagious" (Participant AO9cW, Faculty of Arts, Cluster 2). Another commented on the energetic lectures: "I am so passionate that I often have to restrain myself during lectures to not exceed time limits. I eagerly address all sorts of questions related to my subject, even outside of class hours" (Participant ixJst, Faculty of Management, Cluster 3).

Faculty Members' Relational Well-Being

A one-way ANOVA revealed significant differences in the means of HP (for the subject) ($F(2, 94) = 22.12, p < 0.001$), OP (for the subject) ($F(2, 94) = 80.57, p < 0.001$), and PTEACH (passion for teaching) ($F(2, 94) = 105.23, p < 0.001$), across the three clusters derived from the k-means clustering. Tukey's post hoc test revealed that PTEACH significantly differentiated Cluster 1 ($M = 6.70, SD = 0.24$) and Cluster 3 ($M = 6.75, SD = 0.28$) from Cluster 2 ($M = 5.84, SD = 0.31$), $p < 0.001$, respectively. However, no significant difference was observed between Cluster 1 and Cluster 3 ($p = 0.637$). For HP, Tukey's post hoc analysis revealed significant differences among all three clusters. Cluster 2 reported the lowest means ($M = 5.42, SD = 0.57$) and differed significantly ($p < 0.001$) from Cluster 1 ($M = 5.99, SD = 0.65$) and Cluster 3 ($M = 6.37, SD = 0.43$). Significant differences were also found between Clusters 1 and Cluster 3 ($p = 0.015$). Finally, Tukey's post hoc test revealed that OP significantly differentiated Cluster 3 ($M = 4.92, SD = 0.65$) from Cluster 1 ($M = 2.89, SD = 0.72$), $p < 0.001$ and Cluster 2 ($M = 2.87, SD = 0.90$), $p < 0.001$. However, no significant difference was observed between Cluster 1 and Cluster 2 ($p = 0.993$).

A one-way ANOVA was also conducted to compare the means of three relational outcomes such as the quality of relationships maintained with work colleagues or peers (Rel_P), family (Rel_F), and the social support (SS) provided to students across the three identified clusters. Significant differences were found in the means of Rel_P ($F(2, 94) = 6.639, p = 0.002$), Rel_F ($F(2, 94) = 5.167, p = 0.007$), and SS ($F(2, 94) = 16.870, p < 0.001$) across these clusters. Tukey's Honestly Significant Difference (HSD) was used to further investigate the specific differences in the outcome variables among three identified clusters.

For Rel_P, Tukey's post hoc test revealed that Cluster 3 ($M = 6.26, SD = 1.16$) and Cluster 1 ($M = 6.08, SD = 1.03$) had significantly higher means than Cluster 2 ($M = 5.26, SD = 1.53$), $p = 0.002$ and $p = 0.010$, respectively. However, no significant difference was observed between Cluster 1 and Cluster 3 ($p = 0.539$). For Rel_F, according to Tukey's post hoc analysis, Cluster 2 reported significantly lower means ($M = 6.22, SD = 0.64$) than Cluster 3 ($M = 6.71, SD = 0.52$), $p = 0.002$ and Cluster 1 ($M = 6.53, SD = 0.65$), $p = 0.05$. No significant difference was found between

Clusters 1 and Cluster 3 ($p=0.223$). Finally for SS, post hoc tests showed that Cluster 2 had a significantly lower mean ($M=5.80$, $SD=0.42$) compared to Cluster 1 ($M=6.37$, $SD=0.45$), $p<0.001$ and Cluster 3 ($M=6.41$, $SD=0.48$) $p<0.001$. Cluster 1 and Cluster 3 were not significantly different from each other ($p=0.606$).

In sum, the ANOVA and Tukey's post-hoc tests indicate that Cluster 2 (low passion for teaching, low harmonious passion, low obsessive passion) showed significantly lower scores in relational well-being with peers (Rel_P: quality of relationships with colleagues), family (Rel_F: quality of relationships with family), and social support provided to students (SS) compared to Cluster 1 (high passion for teaching, moderate harmonious passion, low obsessive passion) and Cluster 3 (high passion for teaching, high harmonious passion, high obsessive passion). Clusters 1 and 3 exhibited stronger relational outcomes, suggesting that higher passion, particularly harmonious, supports professional engagement and interpersonal connections. Cluster 2's lower scores highlight potential disengagement, warranting further exploration. Theoretically, this observation aligns with literature suggesting that high levels of passion and support are beneficial for educational outcomes (Ruiz-Alfonso & León, 2017), positioning Clusters 1 and 3 as potentially exemplar groups.

Discussion

This study investigated the role of faculty passion for teaching in shaping their professional and relational experiences, revealing that high passion is not always beneficial. Employing a mixed-methods approach guided by the Dualistic Model of Passion (DMP; Vallerand et al., 2003), the study addressed three objectives: (1) to explore how faculty articulate their passion for teaching, (2) to examine how this passion is enacted in pedagogical practices, and (3) to assess how passion for teaching and the subject is associated with faculty members' relational well-being. Our findings challenge the assumption that greater passion uniformly enhances faculty outcomes, showing that while harmonious passion (HP) fosters positive engagement and relationships, obsessive passion (OP) may introduce risks, such as potential burnout, due to overcommitment. This complexity forms the study's primary contribution, offering a nuanced perspective on passion in academia.

The Dual Nature of Faculty Passion

Contrary to previous research that often focuses on a unidimensional view of passion (Yukhymenko-Lescroart & Sharma, 2019), our qualitative findings advocate for the existence of two passion types. Faculty expressed HP as intrinsic joy in pedagogy (e.g., "I love creating learning spaces," Participant 1v5oV) and OP as compulsive dedication (e.g., "limitless commitment... at the expense of personal time," Participant RcZqz). In terms of pedagogical practices, HP was expressed through student-centered approaches, such as supporting student progress ($n=38$), while OP drove intense efforts, like excessive preparation ($n=23$), sometimes at personal cost.

The Low Passion cluster (Cluster 2), with 36% of faculty holding teaching awards despite low passion across teaching (PTEACH), harmonious passion (HP), and obsessive passion (OP) suggests that external recognition, such as teaching awards, may not always align with intrinsic passion. Faculty in this cluster, predominantly with over 10 years of experience (68%), may have initially exhibited passion that waned due to prolonged exposure to academic stressors, such as heavy administrative loads or research pressures (Day & Gu, 2019). Alternatively, awards may reflect effective teaching practices driven by professional duty rather than passion, highlighting a disconnect between institutional metrics and personal motivation. This finding underscores the need to explore how institutional cultures can sustain passion over time, particularly for experienced faculty, to prevent disengagement and enhance relational well-being.

Moreover, the prevalence of Dual Passion (Cluster 3) in STEM faculty (48%) compared to Social Sciences and Education (26% each) suggests disciplinary differences in passion profiles. STEM's high research demands, often tied to grant acquisition and publication pressures, may foster obsessive passion (OP) alongside strong teaching passion, as faculty strive to excel in both domains (Stupnisky et al., 2023). This intense engagement, while productive, risks overcommitment, as evidenced by qualitative reports of excessive time investment. In contrast, Social Sciences and Education faculty may prioritize pedagogical roles, aligning with Cluster 1's balanced passion. These disciplinary variations highlight the need for tailored institutional support, such as discipline-specific workload adjustments, to mitigate OP's risks in STEM while leveraging passion's benefits across fields. The contrast underscores passion's dual impact, challenging idealized views of academia.

This complexity becomes even more apparent when considering faculty career stage. The variation in the percentage of faculty with over 10 years of experience across clusters (54% in Cluster 1, 68% in Cluster 2, 74% in Cluster 3) highlights the complex interplay between career stage and passion profiles. Cluster 3's high proportion of experienced faculty suggests that intense passion, both harmonious and obsessive, may solidify over time, possibly as faculty become entrenched in their roles and face ongoing pressures to excel in teaching and research. Conversely, Cluster 2's significant share of experienced faculty raises concerns about the sustainability of passion in demanding academic environments, where prolonged exposure to stressors may lead to disengagement. Cluster 1, with a slightly lower proportion of experienced faculty, exemplifies a balanced approach that may be more attainable for faculty who have navigated career stages with institutional support or personal strategies to maintain boundaries. However, our cross-sectional design limits causal inferences about passion's development, an area of potential future research.

Balancing Passion and Well-Being

Quantitative analysis via k-means clustering revealed three passion profiles based on passion for teaching (PTEACH), HP, and OP for the subject. Cluster 1 ($n=34$, high PTEACH, moderate HP, low OP) demonstrated balanced passion, with high levels of relational well-being across peers (Rel_P: $M=6.08$, $SD=1.03$), family (Rel_F:

$M=6.53$, $SD=0.65$), and students (SS: $M=6.37$, $SD=0.45$), reflecting HP's adaptive benefits (Frenzel et al., 2019). Cluster 2 ($n=29$, low PTEACH, low HP, low OP) indicated signs of disengagement, with significantly lower relational outcomes (Rel_P: $M=5.26$, $SD=1.53$; Rel_F: $M=6.22$, $SD=0.64$; SS: $M=5.80$, $SD=0.42$; $p<0.01$), suggesting motivational challenges (Yukhymenko-Lescroart & Sharma, 2019). Cluster 3 ($n=34$, high PTEACH, high HP, high OP) presented a complex profile with faculty exhibiting both strong professional and relational engagement (Rel_P: $M=6.26$, $SD=1.16$; Rel_F: $M=6.71$, $SD=0.52$; SS: $M=6.41$, $SD=0.48$); however, high OP ($M=4.92$, $SD=0.65$) and overcommitment (e.g., "40 h a week... at the expense of leisure," Participant RcZqz) may suggest a risk of unsustainable engagement, contrasting with Cluster 1's balanced approach.

These quantitative profiles are further enriched by qualitative findings, which revealed that many faculty members articulated passion for both teaching and their disciplinary subject. Rather than reflecting separate or compartmentalized domains, this overlap suggests a more integrated or multifaceted orientation toward professional passion. This observation aligns with the DMP's premise that harmonious passion can span multiple valued activities, fostering a balanced and adaptive engagement with work (Vallerand, 2015). Faculty expressing this dual passion may model synergistic engagement that benefits both pedagogical effectiveness and disciplinary advancement.

Passion Under Pressure

Our findings challenge the assumption of passion's universal benefits, and this is most evident in Cluster 3, where high OP coexists with strong teaching commitment but potential vulnerabilities. Research highlights that OP, characterized by compulsive engagement, can strain personal resources, increasing the risk of burnout, a state marked by emotional exhaustion and reduced well-being (Maslach & Leiter, 2016). Although our study did not measure burnout directly, Cluster 3's profile aligns with potential risk factors, such as prioritizing work over personal life (Schaufeli et al., 2006). For instance, faculty descriptions of excessive time investment mirror patterns linked to overcommitment, which may deplete energy and strain relationships (Vallerand & Houliort, 2019). In contrast, Cluster 1's moderate HP supports balanced engagement, reducing such risks (Vallerand, 2015). Cluster 3's paradox, high productivity with relational costs (evident in participants' qualitative responses), extends prior work by suggesting that intense passion, often valued in academia, may foster conditions conducive to burnout (Vallerand & Houliort, 2019).

The "publish or perish" culture at research-intensive universities amplifies obsessive passion (OP) by reinforcing the ideal worker norm, which prioritizes relentless productivity over personal well-being, exacerbating overwork risks for faculty (Dumas & Perry, 2023). Faculty in Cluster 3, who reported excessive time investment (e.g., "40 h a week... at the expense of leisure"), align with precursors of burnout, such as overcommitment, reflecting this norm's impact as they strive to meet intensified expectations for research and teaching excellence (Maslach & Leiter, 2016). Historical estimates suggest faculty work over 55 h per week (Jacobs &

Winslow, 2004), but current pressures may be even higher due to tenure demands and evolving student expectations. Compared to structured fields like corporate business, academia's flexible schedules and passion-driven work blur work-life boundaries, fostering OP as faculty internalize institutional demands as personal imperatives (Dumas & Perry, 2023). While the overwork culture, evident in sectors like technology and healthcare, suggests similar risks, academia's unique challenges, particularly for early-career faculty, intensify OP-related strain, underscoring the need for institutional strategies to promote sustainable passion and balanced engagement (Schaufeli et al., 2009; Maslach & Leiter, 2016).

Thus, our findings reframe passion as a double-edged sword, contributing new insights into the complex dynamics of faculty well-being and institutional expectations.

Implications for Faculty Support

The findings concerning faculty members' passion for teaching and their disciplines have significant implications for our understanding of professional development frameworks that emphasize professional competencies and identity, institutional culture, and the value attributed to the academic profession. Firstly, the link between faculty members' passion for teaching and their disciplines serves as a catalyst for enhancing and expanding professional competencies through ongoing investment in pedagogical strategies and disciplinary expertise. This commitment to lifelong learning, a core goal in academia, can be supported by institutions offering interdisciplinary workshops and collaborative projects that merge pedagogical skills with disciplinary research. Such initiatives encourage faculty to continuously refine their curricula and adopt innovative teaching methods that enrich student learning experiences.

Secondly, passion for teaching and for the discipline profoundly shape faculty members' professional identities. The complex nature of professional identity within academic settings benefits from faculty understanding how to balance their love for teaching with their dedication to their subjects. Flexible role assignments and identity workshops can assist faculty in exploring various roles such as researcher, mentor, and educator, thereby enriching their sense of self within the academic profession and enabling them to perform these roles with authenticity and enthusiasm.

Thirdly, the expression of faculty members' passion significantly influences institutional culture. This passion can be contagious, fostering a learning environment where enthusiasm for teaching and learning is nurtured. This cultural aspect highlights the importance of institutional support in recognizing faculty passions as central to the academic mission.

Lastly, the study underscores that passionate teaching and disciplinary engagement greatly benefit the academic profession, emphasizing educators' roles in shaping future generations and advancing knowledge. This interplay of competencies, identity, culture, and valorization illustrates the complex yet rewarding nature of academic work, highlighting the substantial benefits of cultivating passion in academia.

For instance, to foster balanced passions among new faculty, Ph.D. programs can play a pivotal role by integrating training that promotes harmonious passion (HP) and mitigates obsessive passion (OP). Many graduate students in high-intense research environments observe faculty role models who prioritize research productivity over balanced engagement, potentially fostering OP. Programs can counter this by offering mentorship from faculty who model balanced passion, demonstrating how to integrate teaching, research, and personal well-being. Workshops on workload management, time prioritization, and boundary-setting can equip students with practical tools to maintain HP. Additionally, exposure to diverse academic roles, such as those in teaching-focused institutions, can broaden perspectives beyond research-intensive norms. These strategies have the potential to prepare future faculty to navigate academic demands while preserving relational well-being.

The study's outcomes also suggest practical implications for designing more effective professional development initiatives that nurture HP to promote relational well-being and sustainable engagement, while addressing OP's potential risks. Institutions can foster HP through workshops aimed at enhancing teaching joy without compulsive demands (Stupnisky et al., 2019). For Cluster 3 faculty, strategies like workload management or wellness resources could mitigate overcommitment, reducing burnout risk factors (Maslach & Leiter, 2016). For the Low Passion cluster (Cluster 2), particularly faculty with over 10 years of experience (68%), understanding motivation at this career stage is critical to addressing disengagement. Special opportunities exclusive to full professors, such as leadership roles in curriculum development, sabbaticals for pedagogical innovation, or prestigious recognition programs, could rekindle intrinsic motivation (Day & Gu, 2019). A targeted study of this group, exploring motivators like protected time, financial incentives, or public acknowledgment, could surface strategies to enhance passion and relational well-being. For instance, offering full professors opportunities to mentor junior faculty or lead interdisciplinary initiatives may foster a renewed sense of purpose, counteracting the motivational deficits observed in Cluster 2 and strengthening institutional culture.

These tailored interventions strengthen faculty resilience and institutional cultures, balancing passion's benefits with its challenges. Moreover, developing policies that support flexible role management and workload distribution can create an infrastructure that empowers faculty and nurtures their passions, optimizing their roles as department members, educators, and contributors to their disciplines.

Limitations

This study advances understanding of how teaching passion shapes faculty relational well-being, but several limitations warrant consideration. First, the focus on teaching passion may not fully capture the experiences of faculty whose well-being is driven by passion for research, service, or leadership. For example, research-oriented faculty may prioritize scholarly networks, while service-oriented faculty may find fulfillment in leadership roles, such as shaping academic programs. These roles can also foster fulfillment and social connections, such as through scholarly productivity,

mentoring, or leading institutional initiatives (Daumiller et al., 2020; Day & Gu, 2019; Stupnisky et al., 2019). By centering teaching, the study may underrepresent the diverse pathways through which passion influences faculty outcomes and may overlook key predictors of well-being across roles.

Second, the single-institution sample from a research-intensive university may limit the generalizability of findings. Institutional contexts, such as liberal arts colleges or community colleges, often prioritize teaching over research, potentially fostering distinct passion profiles and relational outcomes (Day & Gu, 2019). The research-intensive setting may also amplify perceived tensions between teaching and research, though balanced passion in some faculty suggests synergistic potential.

Third, the Dualistic Model of Passion (DMP), while robust for analyzing harmonious and obsessive passion, is rooted in Western individualistic assumptions about passion as a self-defining construct (Vallerand, 2015). Although qualitative findings highlighted relational expressions of passion, the study's design limits exploration of how collectivist cultural norms might shape passion's conceptualization and impact on well-being. For example, in collectivist cultures, passion may prioritize institutional or community goals over individual fulfillment, potentially altering its relational impacts (Shin & Kim, 2023).

Fourth, the sample's skew toward faculty with over 10 years of experience limits its insights into how passion develops across career stages, particularly for pre- and post-tenured faculty. Longitudinal studies could clarify whether teaching experience fosters harmonious passion or mitigates obsessive passion over time.

Finally, the study did not collect data on faculty workloads or directly measure the impact of ideal worker norms, which may contribute to obsessive passion. The lack of recent data on faculty work hours underscores the need for future research to quantify these pressures and their effects on passion and well-being.

Future research should adopt a more integrative approach, exploring passion across academic roles, cultural contexts, and institutional settings. Longitudinal designs could highlight how passion profiles evolve and inform strategies to support balanced engagement and sustainable academic careers. Studies incorporating direct measures of burnout (e.g., Maslach Burnout Inventory) could further clarify risks associated with obsessive passion, particularly for faculty showing signs of strain.

Conclusion

This study advances our understanding of passion in higher education by disentangling its dualistic nature and its implications for relational well-being. By applying the Dualistic Model of Passion (DMP) and employing a mixed-methods approach, we demonstrated that passion for teaching and passion for the academic discipline is distinct yet interconnected constructs, each with unique consequences for faculty dynamics. Our findings reveal three key contributions to the literature. First, we provide empirical evidence that harmonious passion (HP) and obsessive passion (OP) coexist in faculty members, but their interplay shapes divergent outcomes: HP fosters balanced engagement and positive relationships, while OP risks relational strain and burnout. Second, we identify three passion profiles, *Balanced Passion*, *Low Passion*, and *Dual Passion*, that provide a snapshot of how faculty navigate competing

demands. Third, our integration of qualitative narratives with quantitative clustering underscores the importance of contextualizing passion within institutional and relational ecosystems.

The study's findings also highlight passion's duality by demonstrating how it could become a resource when harmoniously integrated, but a liability when compulsively pursued. For faculty, this underscores the need to reflect on the internalization of their passions. Faculty in the *Balanced Passion* cluster, who reported high passion for teaching and moderate HP for their discipline, exemplify sustainable engagement, prioritizing student-centered pedagogy while maintaining boundaries to preserve relational well-being. In contrast, the *Dual Passion* cluster, characterized by high HP and OP, signals the precariousness of conflating dedication with overinvestment. These faculty, while effective in their roles, risked strained family relationships and emotional exhaustion, illustrating how institutional pressures to "do what you love" can exploit passion. For early-career faculty, these insights are particularly salient, as tenure demands may incentivize OP, jeopardizing long-term well-being.

At the institutional level, the findings advocate for policies that nurture HP while mitigating OP's risks. This includes rethinking workload distribution to reduce compulsive overwork, recognizing teaching excellence alongside research productivity, and providing resources for boundary management (e.g., workshops on time prioritization, mentorship programs). Leaders should also address the *Low Passion* cluster's relational deficits by fostering communities of practice to reignite intrinsic motivation and collegial support.

For the academic profession, this study calls for a cultural shift in how passion is valorized. While passion remains central to faculty identity and student success, it should also be acknowledged for its potential costs. Professional development frameworks should promote passion as a dynamic, context-dependent resource, one that thrives in environments prioritizing autonomy, purpose, and holistic well-being over narrow metrics of productivity. By distinguishing passion dimensions, we revealed that faculty can hold high passion for teaching independent of their discipline, with implications for relational health. Further, our mixed-methods approach moved beyond unidimensional models, showing that passion is not merely "present" or "absent" but exists in profiles that reflect complex internalization processes. More importantly, we demonstrated that relational well-being is not a byproduct of passion itself but of how passion is internalized, autonomously (HP) or compulsively (OP). In closing, this study reframes passion as a dual-edged force in academia. By embracing its complexity, stakeholders can cultivate environments where passion fuels both excellence and well-being, ensuring that faculty thrive as educators, scholars, and individuals.

Author Contribution Tanya Chichekian: conceptualization, data curation, formal analysis, funding acquisition, supervision, validation, visualization, writing- original draft, review, and editing.

Anna Sverdlík: formal analysis, writing- original draft, review, and editing.

Marilou Bélisle: Writing – review & editing.

Robert J. Vallerand: conceptualization, validation.

Catherine Maheux: data curation, formal analysis, project administration.

Funding This research received funding from the Fonds de Recherche Québec- Société et Culture. (Grant # 2022-NP-296184).

Data Availability The datasets generated and analyzed during this study are available upon request from the corresponding author.

Declarations

Conflicting of interests The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval and Informed Consent. Ethical approval was granted by the Institutional Review Board of the Université de Sherbrooke (Ref #2021–3014). All participants provided written informed consent prior to participation.

References

- Bélanger, J. J., & Ratelle, C. F. (2023). Passion and relational well-being in education. *Journal of Social and Personal Relationships*, 40(3), 789–810. <https://doi.org/10.1177/02654075221145678>
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511–532. <https://doi.org/10.5465/amr.2009.40633190>
- Chichekian, T., & Vallerand, R. J. (2022). Passion for science and persistence in STEM: The mediating role of emotions. *Personality and Individual Differences*, 186(Part B), Article 111358. <https://doi.org/10.1016/j.paid.2021.111358>
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.
- Daumiller, M., Janke, S., & Stupnisky, R. H. (2022). Faculty motivation and well-being in academia: A cross-national perspective. *Higher Education Research & Development*, 41(5), 1456–1472. <https://doi.org/10.1080/07294360.2021.1978901>
- Daumiller, M., Stupnisky, R. H., & Janke, S. (2020). Motivation of higher education faculty: Theoretical approaches, empirical evidence, and future directions. *International Journal of Educational Research*, 99, Article 101502. <https://doi.org/10.1016/j.ijer.2019.101502>
- Daumiller, M., Stupnisky, R. H., & Janke, S. (2023). Motivation and well-being in academia: A cross-national perspective. *Higher Education Research & Development*, 42(4), 789–805. <https://doi.org/10.1080/07294360.2022.2156789>
- Day, C. (2004). *A passion for teaching*. Routledge.
- Day, C., & Gu, Q. (2019). *Resilient teachers, resilient schools: Building and sustaining quality in testing times*. Routledge.
- Dumas, M. J., & Perry, A. M. (2023). The ideal worker norm in academia: Implications for equity and well-being. *Educational Researcher*, 52(4), 215–223. <https://doi.org/10.3102/0013189X231156789>
- Fernández-García, D., Marcos, J. L., & Fernández-Cerero, J. (2023). Obsessive passion in academia: A systematic review. *Journal of Higher Education*, 94(5), 678–695. <https://doi.org/10.1080/00221546.2023.2189012>
- Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., & Sutton, R. E. (2009). Emotional transmission in the classroom: Exploring the relationship between teacher and student enjoyment. *Journal of Educational Psychology*, 101(3), 705–716. <https://doi.org/10.1037/a0014695>
- Han, J., & Perron, B. E. (2022). Faculty passion and well-being: A meta-analysis. *Studies in Higher Education*, 47(3), 512–527. <https://doi.org/10.1080/03075079.2020.1854189>
- Heffernan, T., & Smithers, K. (2024). Working at the level above: University promotion policies as a tool for wage theft and underpayment. *Higher Education Research & Development*, 43(5), 1217–1231. <https://doi.org/10.1080/07294360.2024.2412656>
- Howard, J. L., & Hoffman, M. A. (2023). Latent profile analysis of faculty motivation and well-being. *Educational Psychology*, 43(5), 456–473. <https://doi.org/10.1080/01443410.2023.2198901>
- Jacobs, J. A., & Winslow, S. E. (2004). Overworked faculty: Job stresses and family demands. *The ANNALS of the American Academy of Political and Social Science*, 596(1), 104–129. <https://doi.org/10.1177/0002716204268185>

- Jang, H. R., Cheon, S. H., Reeve, J., Song, Y. G., & Lee, Y. (2023). Two ways teachers can develop greater harmonious passion. *Physical Education and Sport Pedagogy*, 30(5), 641–656. <https://doi.org/10.1080/17408989.2023.2206832>
- Liu, Y., Hau, K. T., & Zheng, X. (2020). Does instrumental motivation help students with low intrinsic motivation? Comparison between Western and Confucian students. *International Journal of Psychology*, 55(2), 182–191. <https://doi.org/10.1002/ijop.12563>
- Lovett, S. (2023). Sustaining teacher passion through professional learning communities. *Journal of Professional Capital and Community*, 8(1), 12–25. <https://doi.org/10.1108/JPCC-09-2022-0051>
- Malecki, C. K., & Demaray, M. K. (2002). Measuring perceived social support: Development of the Child and Adolescent Social Support Scale (CASSS). *Psychology in the Schools*, 39(1), 1–18. <https://doi.org/10.1002/pits.10004>
- Marsh, H. W., Vallerand, R. J., Lafrenière, M.-A.K., Parker, P. D., Morin, A. J. S., Carbonneau, N., Jowett, S., Bureau, J. S., Fernet, C., Guay, F., Abduljabbar, A. S., & Paquet, Y. (2013). Passion: Does one scale fit all? Construct validity of two-factor passion scale and psychometric invariance over different activities and languages. *Psychological Assessment*, 25(3), 796–809. <https://doi.org/10.1037/a0032573>
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>
- Moè, A. (2016). Harmonious passion and its relationship with teacher well-being. *Teaching and Teacher Education*, 59, 431–437. <https://doi.org/10.1016/j.tate.2016.07.017>
- Moè, A., & Pazzaglia, F. (2023). Passion and pedagogy: Exploring teacher well-being and engagement. *Teaching and Teacher Education*, 119, Article 103854. <https://doi.org/10.1016/j.tate.2022.103854>
- Ruiz-Alfonso, Z., & León, J. (2017). Passion for math: Relationships between teachers' emphasis on class contents usefulness, motivation and grades. *Contemporary Educational Psychology*, 51, 284–292. <https://doi.org/10.1016/j.cedpsych.2017.08.010>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Schellenberg, B. J. I., Verner-Filion, J., Gaudreau, P., Bailis, D. S., Lafrenière, M.-A.K., & Vallerand, R. J. (2019). Testing the dualistic model of passion using a novel quadripartite approach: A look at physical and psychological well-being. *Journal of Personality*, 87(2), 163–180. <https://doi.org/10.1111/jopy.12378>
- Senécal, C. B., Vallerand, R. J., & Vallières, E. F. (1992). Construction et validation de l'Échelle de qualité des relations interpersonnelles (EQRI) [Construction and validation of a French scale "Quality of interpersonal relationships"]. *Revue Européenne De Psychologie Appliquée/european Review of Applied Psychology*, 42(4), 315–324.
- Shin, J. C., & Kim, S. J. (2023). Passion in East Asian academia: Cultural influences on faculty motivation. *Higher Education*, 85(3), 567–584. <https://doi.org/10.1007/s10734-022-00876-5>
- Stupnisky, R. H., & Hall, N. C. (2024). Faculty passion and research productivity: A longitudinal study. *Studies in Higher Education*, 49(3), 456–472. <https://doi.org/10.1080/03075079.2024.2338269>
- Stupnisky, R. H., BrckaLorenz, A., & Nelson Laird, T. F. (2019). How does faculty research motivation type relate to success? A test of self-determination theory. *International Journal of Educational Research*, 98, 25–35. <https://doi.org/10.1016/j.ijer.2019.08.007>
- Stupnisky, R. H., Larivière, V., Hall, N. C., & Omojiba, O. (2023). Predicting research productivity in STEM faculty: The role of self-determined motivation. *Research in Higher Education*, 64(4), 598–621. <https://doi.org/10.1007/s11162-022-09718-3>
- Tsui, A. S., & Cheng, G. (1999). Passion and motivation in Chinese academic contexts. *Asia Pacific Journal of Management*, 16(2), 173–190. <https://doi.org/10.1023/A:1015481817610>
- Universities Canada. (2024). *Facts and stats*. <https://univcan.ca/universities/facts-and-stats/>
- Vallerand, R. J. (2015). *The psychology of passion: A dualistic model*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199777600.001.0001>
- Vallerand, R. J., & Houlfort, N. (2019). *Passion for work: Theory, research, and applications*. Oxford University Press.
- Vallerand, R. J., & Paquette, V. (2024). The role of passion in the resilience process. *Self and Identity*, 23(3–4), 288–305. <https://doi.org/10.1080/15298868.2024.2369056>

- Vallerand, R. J., Blanchard, C. M., Mageau, G. A., Koestner, R., Ratelle, C. F., Léonard, M., Gagné, M., & Marsolais, J. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, 85(4), 756–767. <https://doi.org/10.1037/0022-3514.85.4.756>
- Vallerand, R. J., Robichaud, J.-M., Rahimi, S., & Bélanger, J. J. (2024). Who's the happiest and why? The role of passion and self-regulation in psychological well-being. *Motivation and Emotion*, 48(3), 419–444. <https://doi.org/10.1007/s11031-024-10076-2>
- Wang, H., Hall, N. C., & Rahimi, S. (2020). Communities of practice and teacher passion in higher education. *Higher Education Research & Development*, 39(5), 1012–1026. <https://doi.org/10.1080/07294360.2019.1693502>
- Yukhymenko-Lescroart, M. A., & Sharma, G. (2018). Passion and well-being in higher education: A mixed-methods study. *Journal of Faculty Development*, 32(3), 15–24. <https://doi.org/10.1177/0894845320946398>
- Yukhymenko-Lescroart, M. A., & Sharma, G. (2019). The relationship between faculty members' passion for work and well-being. *Journal of Happiness Studies*, 20(3), 863–881. <https://doi.org/10.1007/s10902-018-9977-z>
- Yukhymenko-Lescroart, M. A., & Sharma, G. (2021). Passion and faculty engagement: A longitudinal study. *Journal of Higher Education Policy and Management*, 43(4), 412–428. <https://doi.org/10.1080/1360080X.2020.1856789>
- Zhang, L., & Tsang, K. K. (2024). Passion and motivation in teaching: A cross-national study. *International Journal of Educational Research*, 118, Article 102134. <https://doi.org/10.1016/j.ijer.2023.102134>

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