

## EMPIRICAL ARTICLE

# Harmony at Home—Nurturing Work-Pet Family Enrichment and Harmony Through a Self-Determination Lens: The Moderating Role of the Dark Triad

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**Received:** 3 March 2025 | **Revised:** 15 May 2025 | **Accepted:** 26 May 2025

**Funding:** Daniel Nunes Silva acknowledges NECE, and this work is supported by FCT—Fundação para a Ciência e a Tecnologia, I.P. by project reference UIDB/04630/2020, DOI: [10.54499/UIDP/04630/2020](https://doi.org/10.54499/UIDP/04630/2020), PhD Research Studentship 2023.04322.BD and grant UIDB/00315/2020 (DOI: [10.54499/UIDB/00315/2020](https://doi.org/10.54499/UIDB/00315/2020)).

**Keywords:** dark triad | harmony | well-being | work-[pet] family boundaries | work-pet[family] enrichment

## ABSTRACT

Work-pet[family] enrichment has been recognised as an important part of the work-family boundaries as many families have pets of their own. Despite its increasing importance for both families and organisations, so far, no studies have explored how and when it increases harmony at home. Relying on the self-determination theory, we argued that work-pet[family] enrichment would improve employees' harmony through the satisfaction of autonomy, relatedness, and competency needs. It was also proposed that the Dark Triad (Machiavellianism, psychopathy, and narcissism) would moderate this indirect path. To test the proposed conceptual model, a daily diary study during 10 working days was conducted ( $67 \times 10 = 670$  measurement occasions). The multilevel findings supported the hypotheses and showed that work-pet[family] enrichment increased harmony through the satisfaction of the three psychological needs. Moreover, the indirect effect through competence and relatedness needs was moderated by the DT; however, the indirect effect of work-pet[family] enrichment on harmony through the satisfaction of autonomy needs was not moderated by the DT. Specifically, the relationship between work-pet[family] enrichment and harmony through relatedness and competency needs was stronger for those who scored higher on the DT. Practical implications are discussed.

## 1 | Introduction

The newer generations have shifted the way pets are perceived and treated, no longer viewing them as mere possessions but recognising them as relevant members of the family (Graham et al. 2019). Pets are beginning to attract the interest of managers and researchers, given their positive impact on the organisational context regarding employees' well-being (Junça-Silva 2023). Therefore, we proposed a new concept that

captures the way through which work and [pet]family domain intersect: work-pet[family] enrichment (WPFE).

WPFE results from the balance between the pet [family] and work spheres, where each of these spheres provides resources that positively impact the other. WPFE derives from the original concept of work-family enrichment and suggests that experiences in the work role improve the quality of life in the [pet]family domain, satisfying each person's relationship and

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fulfilment needs (Greenhaus and Powell 2006). Through the lens of Self-Determination Theory (SDT), individuals achieve self-fulfilment by satisfying three basic psychological needs: autonomy, relatedness and competence (Ryan and Deci 2017). Based on this framework, we propose that WPFE is likely to enhance life harmony—a balanced and flexible approach to personal well-being that takes into account social and environmental contexts (Kjell and Diener 2020) by facilitating the satisfaction of these fundamental needs.

Additionally, we hypothesise that individual differences, specifically those related to the Dark Triad (DT) personality traits (Machiavellianism, narcissism and psychopathy), may moderate the relationship between WPFE and the satisfaction of basic psychological needs. The DT influences how individuals perceive and navigate life experiences and may consequently shape how employees experience WPFE in relation to the fulfilment of their basic needs, ultimately impacting their life harmony (e.g., Joshanloo 2021).

Despite the growing body of literature on the role of pets in individuals' lives and their impact in the workplace, to the best of our knowledge, no studies have explored the influence of WPFE on psychological outcomes (i.e., basic psychological needs) and well-being (i.e., life harmony). Thus, this study aimed to investigate how and under what conditions WPFE contributes to life harmony, conceptualising the satisfaction of basic psychological needs as an indirect effect and the DT as a moderator of this relationship.

This study contributes to the literature and practice in three ways. First, we introduce the concept of WPFE, expanding existing work-family enrichment theories by considering pets as a key element of family life (Junça-Silva 2023). This is a novel area of inquiry, addressing a gap in the literature regarding the intersection of work roles and pet ownership. Second, by examining how WPFE influences life harmony through the satisfaction of basic psychological needs, this research extends SDT applications to a new domain. Furthermore, exploring how the DT moderates these relationships offers a nuanced understanding of individual differences in how people benefit from WPFE, adding depth to personality research and its interaction with motivational theories.

## 2 | Theoretical Background

### 2.1 | The Relationship Between Work-Pet Enrichment and Life Harmony

Work-Family Enrichment (WFE) represents one of the positive interactions between work and pet [family] domains. It is characterised by the transfer of positive experiences from one role, which subsequently enhances performance and fulfilment in the other (Greenhaus and Powell 2006). While the concept is inherently bidirectional, this study focuses on work-to-pet [family] enrichment, which refers to how positive experiences in the work role facilitate fulfilment within the pet [family] role.

Enrichment occurs when individuals acquire resources—such as skills, perspectives, flexibility, psychological and physical

assets, social capital and financial resources—in one domain, which then positively impacts their performance in the other. Accordingly, work can provide essential resources and skills that enhance pet [family] role functioning (WFE; İplik and Ülbeği 2021). For instance, workplaces that foster empathy and emotional regulation can enhance individuals' sensitivity to their pets' needs, while professional experience improves planning, supporting consistent care and strengthening the human–pet bond (Junça-Silva 2023). Given its bidirectional nature, the work–pet dynamic supports well-being by either replenishing emotional resources depleted by work or amplifying positive work experiences. In stressful or isolating contexts, the pet's unconditional presence fulfils the need for relatedness, promoting emotional recovery and overall well-being (İplik and Ülbeği 2021).

Work and pet [family] dynamics are two core domains in modern life, making their influence on individual well-being particularly salient. Life harmony, a key indicator of well-being, is based on one's cognitive and evaluative perception of one's life. As defined by Kjell et al. (2015), 'harmony encourages a holistic worldview that incorporates a balanced and flexible approach to personal well-being, taking into account social and environmental contexts' (894). Life harmony emerges from the fulfilment of environmental and interpersonal expectations, forming an individualised perception of overall well-being centred on personal needs (Kjell et al. 2015).

Harmony emphasises conscious acceptance and psychological flexibility, reflecting an ability to balance and reconcile different aspects of life, such as work and the pet-family domain (Li 2008). It is a rational process grounded in mutual support and interdependence (WPFE), aimed at achieving a harmonious state, while accounting for broader social and environmental contexts (Kjell et al. 2015). We argue that WPFE enhances life harmony by facilitating the transfer of emotional and psychological resources between domains.

Positive experiences at work bolster feelings of competence and connection at home, reducing stress and enhancing mood regulation (Greenhaus and Powell 2006). This dual-domain support fosters resilience and life satisfaction, contributing to greater overall well-being and a sense of harmony (Kjell and Diener 2020). Moreover, WPFE arising from positive support and mutual dependence between the work and pet-family domains may facilitate a balanced and flexible approach, contributing to higher levels of life harmony (Junça-Silva 2023). Thus, the following was hypothesized:

**H1.** *WPFE has a positive direct relationship with life harmony.*

### 2.2 | The Indirect Effect of the SDT

WPFE refers to the process by which experiences in the work domain positively influence the pet–family domain, providing individuals with psychological or instrumental resources that enhance functioning across both spheres. According to enrichment theory and supported by recent literature (Gagné et al. 2022), such positive spillovers contribute to the satisfaction of individuals' core psychological needs, which, in turn, foster well-being and life harmony.

Self-Determination Theory (SDT; Ryan and Deci 2017) posits that the fulfilment of three basic psychological needs—autonomy, competence and relatedness—is essential for optimal functioning and psychological well-being. These needs act as universal psychological nutrients, and their satisfaction is associated with positive outcomes across various life domains, including increased life satisfaction, emotional balance and harmony (Koekemoer et al. 2020). WPFE can support the fulfilment of these needs in several ways.

First, autonomy, or the experience of volition and psychological freedom, may be enhanced when employees benefit from flexible work arrangements or pet-supportive policies that allow them to align work responsibilities with pet care routines. Such conditions enable individuals to feel more in control of their lives, thereby satisfying the need for autonomy. Second, competence, defined as the need to feel effective and capable in one's activities (Ryan and Deci 2017), may be fostered through the reciprocal benefits of managing both work and pet-family roles successfully. WPFE can lead individuals to perceive themselves as skilled at navigating multiple life domains, which reinforces a sense of mastery and self-efficacy, all of which predict well-being indicators (İplik and Ülbeği 2021). Third, relatedness, the need to feel connected and valued by others, can be fulfilled through the emotional bonds established with companion animals and the social support offered by pet-inclusive work environments (Junça-Silva and Galrito 2024). When organisations acknowledge and accommodate the human–animal bond, they create opportunities for employees to feel more connected and cared for, not only by their pets but also by their workplace community (Junça-Silva 2023).

The satisfaction of these three needs is a well-established predictor of positive psychological outcomes, including life harmony—a state characterised by perceived balance, coherence and integration between different life roles. In this context, we argue that WPFE serves as a source of enrichment that facilitates the satisfaction of basic psychological needs, which in turn leads to greater life harmony. Therefore, the fulfilment of basic psychological needs mediates the relationship between WPFE and life harmony by providing the psychological conditions necessary for individuals to experience harmony across their work and personal lives.

**H2.** *WPFE has an indirect effect on harmony through the satisfaction of (a) competence, (b) autonomy, and (c) relatedness needs at the within-person level.*

### 2.3 | The Moderating Role of the DT

The DT comprises three distinct yet related personality traits: Machiavellianism, narcissism and psychopathy (Paulhus and Williams 2002). Machiavellianism is characterised by manipulativeness, strategic calculation, a lack of moral restraint and a focus on self-interest (Muris et al. 2017). Narcissism involves a grandiose sense of self-importance and superiority, accompanied by a strong desire for external validation (Campbell et al. 2010). Psychopathy is defined by a lack of empathy, impulsivity, emotional detachment and disregard for social norms (Jones and Paulhus 2014).

The fulfilment of basic psychological needs—autonomy, competence and relatedness—as outlined by the SDT (Ryan and Deci 2017), is a key mechanism through which individuals internalise positive experiences and attain well-being. WPFE, as a form of positive enrichment across work and pet-family roles, may serve as a valuable resource that facilitates the satisfaction of these psychological needs, ultimately promoting greater life harmony. However, this indirect relationship may vary depending on individual differences in personality, particularly maladaptive traits captured by the DT—narcissism, Machiavellianism, and psychopathy.

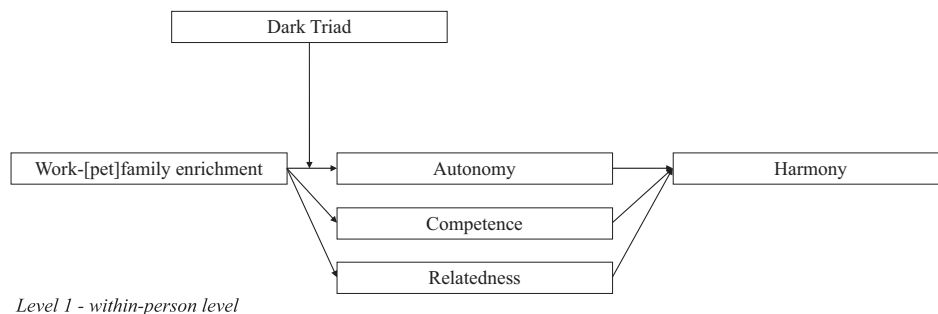
Individuals high in DT traits tend to appraise and engage with their environments in unique ways, as explained by cognitive appraisal theory. While these traits are often associated with interpersonal dysfunction and impaired need satisfaction in traditional human relationships, interactions with pets may be perceived as less threatening, more controllable and more rewarding. Thus, WPFE may represent a uniquely beneficial context for those high in DT traits, allowing them to fulfil their psychological needs in ways that are typically thwarted in human interactions.

For instance, narcissists may experience a sense of autonomy and competence through pet caregiving, where their actions are met with unconditional acceptance rather than judgement—supporting a fragile sense of self and reducing reliance on external validation (Chen et al. 2024). Machiavellian individuals, often strategic and control-oriented, may perceive pet-related routines as opportunities to exercise competence and autonomy in a predictable environment, which contrasts with the instability of human relationships (Ramsay et al. 2023). Similarly, those high in psychopathy—characterised by emotional detachment and low empathy—may still derive relatedness and emotional connection from non-threatening, low-demand interactions with pets (Mooney et al. 2019). In all cases, the low social complexity and high emotional payoff of pet interactions may make WPFE a particularly effective avenue for satisfying psychological needs among individuals high in DT traits.

Therefore, we propose that DT traits moderate the indirect relationship between WPFE and life harmony via basic psychological need satisfaction. Specifically, the indirect effects may be stronger for individuals high in DT traits, for whom traditional interpersonal contexts are less conducive to need fulfilment. In contrast, for individuals low in DT traits—who typically navigate human relationships with greater ease—the incremental contribution of WPFE to need satisfaction and life harmony may be less pronounced. In this sense, WPFE may serve as a compensatory mechanism, helping to meet psychological needs and promote harmony in those who otherwise struggle to do so through conventional social avenues.

In sum, DT traits moderate the indirect effect of WPFE on life harmony through need satisfaction: for individuals high in DT traits, WPFE may play a more central role in enabling need fulfilment and, consequently, fostering greater life harmony (Figure 1).

**H3.** *Machiavellianism moderates the relationship between WPFE and life harmony through the satisfaction of (a) competence, (b) relatedness and (c) autonomy needs, such that*



**FIGURE 1** | Multilevel moderated model.

the relationship will be stronger for those who score higher on machiavellianism (vs. lower).

**H4.** Narcissism moderates the relationship between WPFE and life harmony through the satisfaction of (a) competence, (b) relatedness, and (c) autonomy needs, such that the relationship will be stronger for those who score higher on narcissism (vs. lower).

**H5.** Psychopathy moderates the relationship between WPFE and life harmony through the satisfaction of (a) competence, (b) relatedness and (c) autonomy needs, such that the relationship will be stronger for those who score higher on psychopathy (vs. lower).

### 3 | Methods

#### 3.1 | Participants and Procedure

This study comprised 67 Portuguese participants, representing various sectors such as industry and services. Most participants were female (69%), with a mean age of 31.34 years ( $SD = 7.97$ ) and a mean tenure of 10 years ( $SD = 8.34$ ). They worked, on average, 37.02 h per week ( $SD = 7.37$ ). Most participants held a degree (84.2%). On average, they indicated to have 1.92 pets ( $SD = 0.93$ ). Participants described that they had pets, on average, at 11.19 years ( $SD = 8.75$ ).

Human resource managers from various organisations across Portugal were randomly contacted via email and invited to participate in a study on 'personality'. Participation was entirely voluntary, with assurances of anonymity and confidentiality. Managers who agreed to participate signed an informed consent form and were provided with detailed instructions regarding the daily data collection procedure. Over the course of 10 consecutive days (Monday to Wednesday), participants received a daily email containing a hyperlink to the survey. The response rate was 61%, with 67 out of 110 contacted managers completing the survey, yielding a total of 670 observations. A priori power analysis (effect size = 0.2,  $\alpha = 0.05$ ) confirmed that this final sample size was adequate for the intended statistical analyses.

All procedures were conducted in accordance with relevant ethical guidelines and regulations, with approval obtained from the university ethics committee of the second author. The same survey was administered daily throughout the 10-day period.

### 3.2 | Measures

#### 3.2.1 | Dark Triad

To measure the DT, we used the dirty dozen (Jonason and Webster 2010). It includes 12 items that measure psychopathy (e.g., 'Today, I tended to lack remorse'), narcissism (e.g., 'Today, I tended to want others to admire me') and Machiavellianism (e.g., 'Today, I used deceit or lied to get my way'). The average reliability ranged from ( $\alpha_{\text{between}} = 0.89$ ,  $\omega_{\text{between}} = 0.89$ ;  $\alpha_{\text{within}} = 0.90$ ,  $\omega_{\text{within}} = 0.91$ ).

Questions were answered on a 5-point Likert scale, ranging from 1 'totally disagree' and 5 'totally agree'.

#### 3.2.2 | Basic Psychological Needs

We measured the three dimensions of psychological needs: autonomy, relatedness and competence (Ilardi et al. 1993; Van Den Broeck et al. 2010). It included two items per dimension: autonomy (e.g., 'Today, I felt I could be myself at work'), relatedness (e.g., 'Today, I felt that people at work care about me') and competence (e.g., 'Today, I felt competent and capable'). Participants rated on a five-point Likert scale ranging from 'not at all' to 'extremely'. The average reliability ranged from ( $\alpha_{\text{between}} = 0.83$ ,  $\omega_{\text{between}} = 0.84$ ;  $\alpha_{\text{within}} = 0.90$ ,  $\omega_{\text{within}} = 0.88$ ).

#### 3.2.3 | Work-[Pet]Family Enrichment

WPFE was assessed using the Work-Pet[Family] Scale (Junça-Silva 2025). It included three items ('Today, my involvement with my work helped me to understand different viewpoints and this helps me be a better pet parent'), answered on a 5-point Likert scale (1 'totally disagree'; 5 'totally agree') ( $\alpha_{\text{between}} = 0.90$ ,  $\omega_{\text{between}} = 0.91$ ;  $\alpha_{\text{within}} = 0.89$ ,  $\omega_{\text{within}} = 0.91$ ).

#### 3.2.4 | Harmony

The Abbreviated Version of the Harmony in Life Scale (HILS-3) was used to measure life harmony (Kjell and Diener 2020). It included three items ('Today, I was in harmony') ( $\alpha_{\text{between}} = 0.93$ ,  $\omega_{\text{between}} = 0.92$ ;  $\alpha_{\text{within}} = 0.92$ ,  $\omega_{\text{within}} = 0.92$ ). Items were answered on a 5-point Likert scale, ranging from 1 'totally disagree' and 5 'totally agree'.



### 3.2.5 | Control Variables

We used participants' age and sex as control variables to address potential impacts on well-being and the bond with pets. This choice was influenced by recognised variations in emotional experiences between older and younger individuals, affecting their overall well-being (Livingstone et al. 2018), as well as by findings indicating that women exhibit less tolerance for the exploitation of pets (Graça et al. 2018).

### 3.3 | Data Analysis

This study used a multilevel analysis to examine the proposed model under study. The analysis of variance showed significant variation in daily WPFE ( $ICC = 0.34$ ), daily basic psychological needs (competence = 0.55; relatedness = 0.42 and autonomy = 0.33), harmony ( $ICC = 0.46$ ) and DT (Machiavellianism = 0.42, psychopathy = 0.38 and narcissism = 0.37). Significant variation at both within- and between-person levels allowed us to proceed to a multilevel analysis. The hypotheses were tested through the macro-Multilevel Mediation (MLMed), in SPSS (Rockwood 2020).

## 4 | Results

### 4.1 | Descriptive Statistics

Table 1 presents the descriptive statistics.

**TABLE 1** | Descriptive statistics.

Variables	M	SD	1	2	3	4	5	6	7	8
1. WPFE	3.67	1.20	—	0.75**	0.74**	0.64**	0.81**	0.16*	0.12*	0.31**
2. Autonomy	3.44	1.25	0.66**	—	0.93**	0.87**	0.85**	0.21**	0.11	0.42**
3. Competence	3.37	1.24	0.69**	0.72**	—	0.89**	0.87**	0.23**	0.12	0.46**
4. Relatedness	3.27	1.22	0.62**	0.64**	0.47**	—	0.80**	0.07	−0.04	0.31**
5. Harmony	3.26	1.32	0.66**	0.86**	0.88**	0.81**	—	0.22**	0.07	0.45**
6. Machiavellianism	1.54	1.03	0.16*	0.24**	0.23*	0.10	0.23*	—	0.86**	0.75**
7. Psychopathy	1.63	0.99	0.10	0.09	0.12	−0.09	0.06	0.87**	—	0.66**
8. Narcissism	1.94	1.16	0.30**	0.33**	0.36**	0.27**	0.45**	0.75**	0.56***	—

Note: Zero-order correlations are presented below the diagonal ( $N = 67$ ). Person-centred correlations are presented above the diagonal ( $N = 670$ ). \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Abbreviation: WPFE, Work-[pet]family enrichment.

**TABLE 2** | Fit statistics for models based on confirmatory factor analyses.

Model		$\chi^2/(\text{df})$	RMSEA	CFI	TLI	SRMR	Comparison	$\Delta\chi^2$	$\Delta\text{df}$	$p$
M1	8 latent factors	5.75	0.10	0.86	0.85	0.08	—	—	—	—
M2	4 latent factors	5.97	0.16	0.85	0.83	0.13	M2-M1	61.614	2	< 0.001
M3	3 latent factors	7.24	0.18	0.81	0.79	0.13	M3-M1	331.781	10	< 0.001
M4	1 latent factors	18.83	0.30	0.48	0.42	0.25	M4-M1	1113.042	11	< 0.001

Note: Model with the best fit in italics. M1: Daily WPFE, the three basic psychological needs, the DT and harmony, were placed into eight latent factors. M2: The three basic psychological needs were placed into a single factor plus the three DT traits were placed into a unique factor plus daily WPFE, and harmony into two separate latent factors. M3: The three basic psychological needs were placed into a single factor plus the three DT traits were placed into a unique factor plus daily WPFE and harmony in another latent factor. M4: All variables were placed into a single latent factor.

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual; TLI, Tucker–Lewis's index.

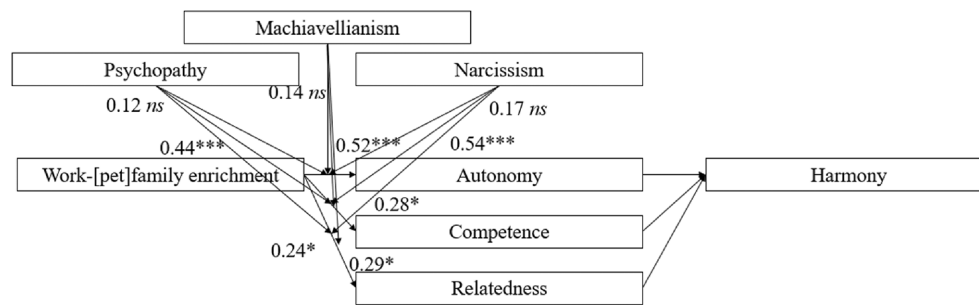
### 4.2 | Confirmatory Factor Analyses

Three multilevel confirmatory factor analyses (CFA) were tested using R. The first measurement model (M1) was the hypothetical model and included the following eight latent factors: daily WPFE, basic psychological needs (autonomy, competence and relatedness), harmony, and the DT (Machiavellianism, psychopathy and narcissism) (the alternative models are described on Table 2). To test their quality, the root mean square error of approximation (RMSEA < 0.08), the comparative fit index (CFI > 0.90), the Tucker-Lewis index (TLI > 0.90), and the standardised root mean square residual (SRMR < 0.08) were analysed (Schreiber et al. 2006). Following these criteria, the proposed model had adequate fit to the data.

### 4.3 | Hypotheses Testing

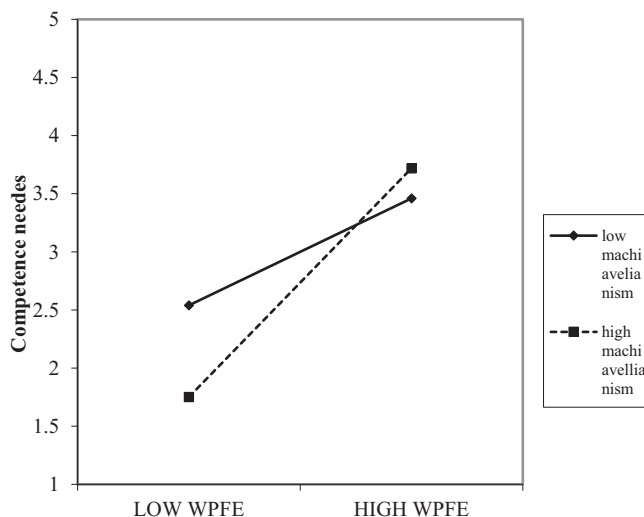
As suggested by Griep et al. (2022), the model that best fits the data was tested. The Bayesian Information Criterion (BIC) and the BIC values adjusted to the sample size were compared between the multilevel mediation model and the moderated mediation model. Results showed that the multilevel moderated mediation model had the lowest BIC value, demonstrating the best fit to the data. Figure 2 presents the model coefficients.

As hypothesized, the findings showed a significant direct effect between daily WPFE and daily life harmony ( $\gamma = 0.42$ ,  $p < 0.001$ , 95% CI [0.15, 0.71]), thereby lending support to H1. Moreover, the results showed a statistically significant indirect effect of daily



Level 1 - within-person level

**FIGURE 2** | Multilevel moderated model results.

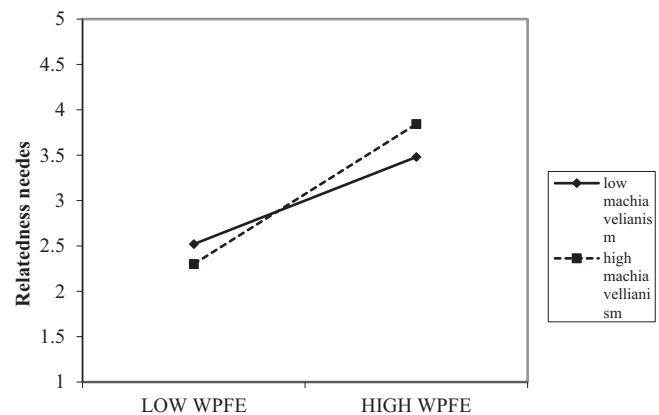


**FIGURE 3** | Interaction between daily WPFE and Machiavellianism predicting competence needs.

WPFE on daily harmony through competence ( $\gamma = 0.30$ ,  $p < 0.01$ , 95% CI [0.09, 0.54]), autonomy ( $\gamma = 0.18$ ,  $p < 0.01$ , 95% CI [0.03, 0.37]), and relatedness needs ( $\gamma = 0.12$ ,  $p < 0.01$ , 95% CI [0.01, 0.28]). Thus, H2 received support from the data.

Results also provided support for H3a and H3b. They showed a significant interaction effect between daily WPFE and Machiavellianism in predicting competence ( $\gamma = 0.52$ ,  $p < 0.01$ , 95% CI [0.28, 0.77]) and relatedness needs ( $\gamma = 0.29$ ,  $p < 0.05$ , 95% CI [0.01, 0.58]). As shown in Figures 3 and 4, the relationship between daily WPFE and daily competence and relatedness needs became stronger for individuals with higher levels of Machiavellianism (vs. lower levels). In other words, competence and relatedness needs depended more on daily WPFE when individuals had higher levels of Machiavellianism.

Results also showed a significant moderated mediation effect (competence:  $\gamma = 0.34$ , 95% CI [0.16, 0.55]; relatedness:  $\gamma = 0.08$ , 95% CI [0.01, 0.20]). When observing the simple slopes (Dawson and Richter 2006), we concluded that the indirect relationship became stronger when individuals had higher levels of Machiavellianism (competence:  $\gamma = 0.98$ ,  $p < 0.01$ ; relatedness:  $\gamma = 0.77$ ,  $p < 0.01$ ) compared to those with lower levels of Machiavellianism ( $\gamma = 0.48$ ,  $p < 0.05$ ; relatedness:  $\gamma = 0.48$ ,  $p < 0.05$ ). Therefore, H3a and H3b were supported by the data.



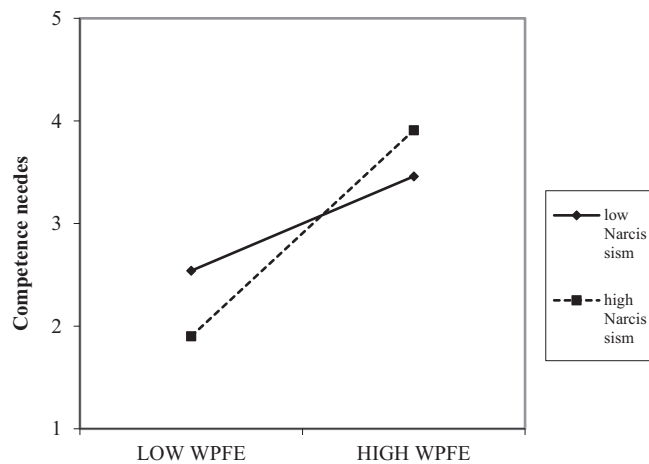
**FIGURE 4** | Interaction between daily WPFE and Machiavellianism predicting relatedness needs.

The results evidenced a non-significant interaction between daily WPFE and Machiavellianism in predicting autonomy needs ( $\gamma = 0.14$ ,  $p = 0.27$ , 95% CI [-0.11, 0.40]) and a non-significant moderated mediation effect ( $\gamma = 0.06$ , 95% CI [-0.05, 0.18]). Thus, H3c was not supported.

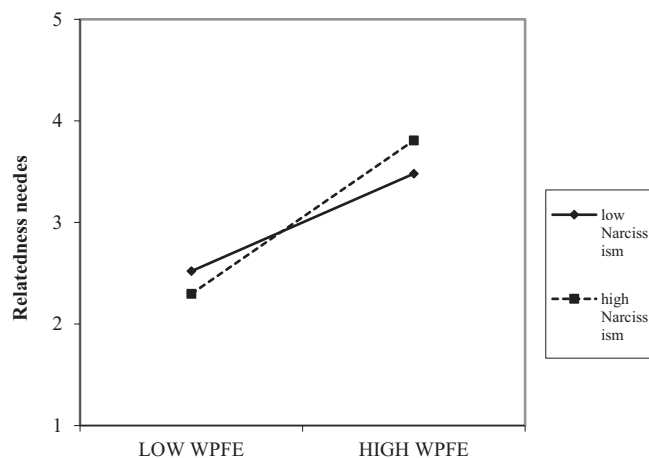
Results also supported H4a and H4b. They showed a significant interaction effect between daily WPFE and narcissism in predicting competence ( $\gamma = 0.54$ ,  $p < 0.01$ , 95% CI [0.32, 0.76]) and relatedness needs ( $\gamma = 0.28$ ,  $p < 0.05$ , 95% CI [0.02, 0.52]). As shown in Figures 5 and 6, the relationship between daily WPFE and daily competence and relatedness needs became stronger for individuals with higher levels of narcissism (vs. lower levels). Results also showed a significant moderated mediation effect (competence:  $\gamma = 0.36$ , 95% CI [0.19, 0.56]; relatedness:  $\gamma = 0.07$ , 95% CI [0.01, 0.18]). The indirect relationship became stronger when individuals had higher levels of narcissism (competence:  $\gamma = 1.04$ ,  $p < 0.01$ ; relatedness:  $\gamma = 0.76$ ,  $p < 0.01$ ) compared to those with lower levels of narcissism ( $\gamma = 0.46$ ,  $p > 0.05$ ; relatedness:  $\gamma = 0.48$ ,  $p < 0.05$ ). Therefore, H4a and H4b were supported by the data.

The results showed a non-significant interaction between daily WPFE and narcissism in predicting autonomy needs ( $\gamma = 0.18$ ,  $p = 0.13$ , 95% CI [-0.05, 0.41]) and a non-significant moderated mediation effect ( $\gamma = 0.07$ , 95% CI [-0.01, 0.19]). Thus, H4c was not supported.

Results also supported H5a and H5b. They showed a significant interaction effect between daily WPFE and psychopathy



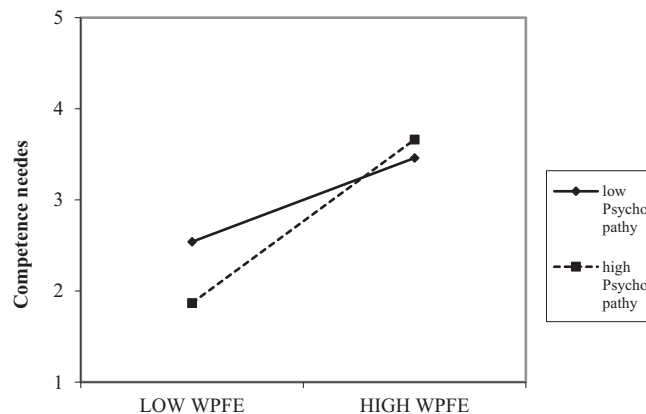
**FIGURE 5** | Interaction between daily WPFE and narcissism predicting competence needs.



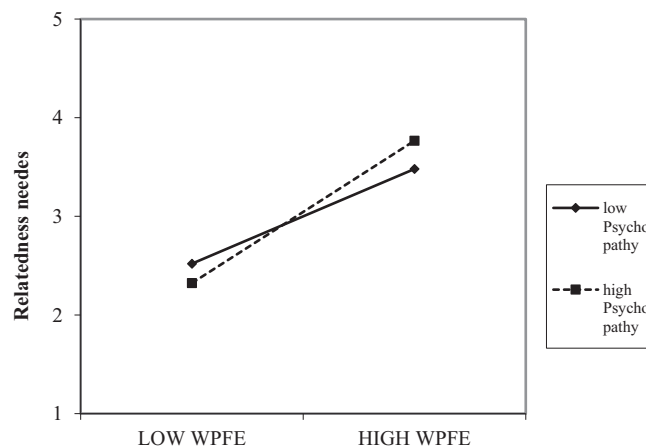
**FIGURE 6** | Interaction between daily WPFE and narcissism predicting relatedness needs.

in predicting competence ( $\gamma = 0.44, p < 0.01, 95\% \text{ CI } [0.17, 0.70]$ ) and relatedness needs ( $\gamma = 0.24, p < 0.05, 95\% \text{ CI } [0.01, 0.52]$ ). The relationship between daily WPFE and daily competence and relatedness needs became stronger for individuals with higher levels of psychopathy (vs. lower levels; Figures 7 and 8). Results also showed a significant moderated mediation effect (competence:  $\gamma = 0.29, 95\% \text{ CI } [0.10, 0.50]$ ; relatedness:  $\gamma = 0.07, 95\% \text{ CI } [0.01, 0.17]$ ). When observing the simple slopes, we concluded that the indirect relationship became stronger when individuals had higher levels (competence:  $\gamma = 0.90, p < 0.01$ ; relatedness:  $\gamma = 0.72, p < 0.01$ ) compared to those with lower levels of psychopathy (competence  $\gamma = 0.46, p > 0.05$ ; relatedness:  $\gamma = 0.48, p < 0.05$ ). Therefore, H5a and H5b were supported by the data.

The results evidenced a non-significant interaction between daily WPFE and psychopathy in predicting autonomy needs ( $\gamma = 0.12, p = 0.36, 95\% \text{ CI } [-0.13, 0.37]$ ) and a non-significant moderated mediation effect ( $\gamma = 0.04, 95\% \text{ CI } [-0.05, 0.17]$ ). Thus, H5c was not supported.



**FIGURE 7** | Interaction between daily WPFE and psychopathy predicting competence needs.



**FIGURE 8** | Interaction between daily WPFE and psychopathy predicting relatedness needs.

## 5 | Discussion

This study investigates how an individual characteristic—DT—interacts with WPFE to predict daily satisfaction of autonomy, competence, and relatedness, and subsequently, daily harmony. In doing so, this research addresses the growing need for further exploration of the work-family interface, particularly how emerging forms of work-family boundaries impact employee well-being (Junça-Silva 2023). This call reflects the evolving nature of modern family structures and their emerging values (Rueff-Lopes et al. 2024).

### 5.1 | Theoretical Implications

The proposed study contributes to the literature in two ways. First, it introduces a novel concept (WPFE), extending existing theories of work-family enrichment by incorporating pets as an integral aspect of family life. This addresses a critical gap in the current literature, where the role of pets in the work-family interface has largely been overlooked (Quan et al. 2024). By examining how pet ownership interacts with work roles to impact family life, the study opens new avenues for understanding how personal

and work domains intersect, particularly in the context of modern family dynamics.

Indeed, we can conclude that WPFE is an emerging construct with potential effects on individuals' motivation, through the satisfaction of psychological needs, and well-being, by promoting life harmony. The satisfaction of the three basic psychological needs—autonomy, competence, and relatedness—appears to function as a key mechanism explaining how WPFE positively influences life harmony. These findings are in line with previous studies that revealed that the satisfaction of basic needs is positively correlated to general well-being and harmony (Demirci 2021) through psychological resources provided by family and workplaces. Thus, this research advances the growing field of well-being studies by providing empirical evidence on the role of WPFE in promoting life harmony.

At last, the study integrates the SDT with the DT personality traits to explore how WPFE influences life harmony through the satisfaction of three fundamental psychological needs: autonomy, relatedness and competence. By extending the application of SDT to this unique domain, the research provides valuable insights into the motivational mechanisms underlying WPFE. Additionally, the exploration of DT traits as moderators offers a nuanced understanding of how individual differences shape the impact of WPFE. This contributes to the personality literature by demonstrating how traits such as Machiavellianism, narcissism and psychopathy interact with motivational processes to influence well-being outcomes.

The findings show that the DT moderate the relationship between WPFE and life harmony through the satisfaction of competence and relatedness needs, but not autonomy needs. Specifically, individuals with higher levels of DT derive greater benefit from WPFE, as the positive influence of WPFE on life harmony through the satisfaction of competence and relatedness needs is stronger for those scoring higher on DT traits compared to those with lower levels. Thus, the relationship between WPFE and life harmony is strengthened for individuals with higher DT traits when these specific psychological needs are fulfilled.

Individuals with high Dark Triad (DT) traits tend to exhibit greater deficits in basic psychological need satisfaction, and such dissatisfaction may activate or intensify these traits. Conversely, when these needs are met, DT traits are attenuated, fostering improved interpersonal functioning and enhanced well-being (Xiao et al. 2021). They may benefit more from WPFE, as pets fulfil the need for relatedness through unconditional, non-resistant bonds. Additionally, competence gained at work can spill over into pet care, enhancing their perceived efficacy in managing daily routines. Due to their disruptive tendencies, individuals high in DT traits often face significant challenges in satisfying basic psychological needs. From the perspective of self-determination theory, when these individuals do achieve need satisfaction, the associated resources are perceived as more valuable precisely because they are scarce and uncertain. This heightened appreciation amplifies the positive effects of need fulfilment, leading to a disproportionate increase in well-being and harmony.

The non-significant moderating effect of the DT traits concerning autonomy needs may be attributed to the distinction between how these basic psychological needs are satisfied. While relatedness and competence are more dependent on intrinsic predispositions, autonomy often relies on external factors, such as flexibility in work schedules (Carlson et al. 2010) or detachment from duties (i.e., taking care of/reponsabilities over pets). Another potential explanation lies in the varying importance of these needs across different contexts. For instance, relatedness tends to hold greater significance within family settings (Reić-Ercegovac and Bubić 2016), whereas competence is more crucial in the work environment (White et al. 2024). In contrast, autonomy appears to carry less weight in both spheres, potentially explaining why the DT traits do not significantly moderate its relationship with WPFE.

## 5.2 | Practical Implications

This research offers valuable insights for organisations and managers by highlighting the complex relationship between work and pets as part of the family unit. When effectively balanced, this relationship can yield positive outcomes for both employees and the organisation. Managers may consider implementing flexible schedules and adopting pet-friendly practices to facilitate WPFE, which can lead to increased satisfaction with life and enhanced harmony among employees. In turn, this greater sense of well-being is likely to result in higher motivation and improved performance, benefiting organisational productivity and employee engagement.

## 5.3 | Limitations and Future Research

While this study has notable strengths, it is important to acknowledge certain limitations. First, we assessed DT at the individual level, as our primary interest was in examining cross-level interactions. However, future research could benefit from exploring daily fluctuations in DT, as suggested by recent findings (Hardin and Smith 2022). Additionally, the reliance on self-reported measures to assess key variables may introduce common method variance (Podsakoff et al. 2003). Future studies should consider incorporating alternative data sources, such as peer evaluations or observational methods, when investigating DT traits to mitigate this issue. Given that relationships with pets vary by gender (Graça et al. 2018), the predominance of female participants in the sample may be a potential limitation. Future research could apply this model to explore gender-based differences more thoroughly.

## 6 | Conclusion

This study demonstrates that WPFE contributes to the satisfaction of basic psychological needs, which, in turn, enhances life harmony. Notably, individuals with higher levels of DT traits experience a strengthened relationship between WPFE and the satisfaction of competence and relatedness needs, leading to greater life harmony. These findings underscore the conditions under which WPFE becomes a crucial factor in promoting overall life harmony, offering valuable insights into how personality traits shape the benefits of WPFE on well-being.



## Ethics Statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee at the second author and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

## Consent

Informed consent was obtained from all individual participants involved in the study.

## Conflicts of Interest

The authors declare no conflicts of interest.

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