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Promoting Harmonious Work Passion among Unmotivated Employees: A Two-Nation Investigation of the Compensatory Function of Cooperative Psychological Climate

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Abstract

This research draws on self-determination theory to investigate (a) the role of cooperative psychological climate in promoting harmonious work passion among employees with low intrinsic motivation; and (b) the mediating role of harmonious passion in linking cooperative psychological climate to behavioral outcomes. We propose that cooperative psychological climate facilitates harmonious passion and, in particular, plays a compensatory role among employees with low intrinsic motivation. In turn, harmonious passion is expected to facilitate both task performance and interpersonal helping, thereby linking cooperative psychological climate to these employee behaviors. We test the model using data from employees and their supervisors across two countries (Singapore and Brazil) and find cross-national evidence that cooperative psychological climate compensates for low intrinsic motivation to predict harmonious passion. Harmonious passion also positively predicts task performance and interpersonal helping, but only in the Brazilian sample. This research enriches the nomological network of harmonious passion, provides an alternative pathway to driving employee passion when intrinsic motivation is lacking, and underscores the value of considering the joint roles of passion predictors so as to reap the performance benefits of harmonious work passion.

Keywords: harmonious work passion; self-determination theory; psychological climate; intrinsic motivation; task performance; interpersonal helping

Promoting Harmonious Work Passion among Unmotivated Employees: A Two-Nation Investigation of the Compensatory Function of Cooperative Psychological Climate

Interest in the concept of work passion has burgeoned over the past decade among scholars (Perrewe, Hochwater, Ferris, McAllister, & Harris, 2014; Vallerand, Houlfort, & Forest, 2014) as well as managers (Boyatzis, McKee, & Goleman, 2002; Hagel, Brown, Ranjan, & Byler, 2014), as a growing body of evidence demonstrates the benefits that derive from having harmoniously passionate employees. Defined as a strong inclination toward an activity that people like and find important, and in which they invest significant time and energy (Vallerand, 2010), passion extends into the work realm, and benefits of work passion include psychological and attitudinal aspects such as subjective vitality, affective commitment, positive perceptions of job resources and adjustment to retirement (e.g., Forest, Mageau, Sarrazin, & Morin, 2011; Houlfort et al., 2015; Lavigne, Forest, Fernet, & Crevier-Brand, 2014), as well as behavioral outcomes including job creativity, task and financial performance, and citizenship behaviors (Burke, Astakhova, & Hang, 2015; Ho & Pollack, 2014; Ho, Wong, & Lee, 2011; Liu, Chen, & Yao, 2011). Despite this growing interest in work passion, however, research in this area is still in its nascent stage of development, and "our knowledge of work passion is modest" (Perrewe et al., 2014, p. 149).

In particular, our knowledge of the antecedents of work passion is scant compared to what we know about passion outcomes, and it remains unclear how organizations can develop and sustain employee passion. Thus far, only a handful of studies have examined predictors consisting of personal factors such as one's identification with work and autonomy orientation, and contextual factors such as perceived leadership style and team/unit autonomy support (e.g., Liu et al., 2011; Murnieks, Mosakowski, & Cardon, 2014; Vallerand et al., 2014). While these

preliminary studies are insightful, the potential for discovering drivers of passion remains largely untapped. In particular, it remains unknown whether each passion predictor operates additively and independently of one another, or whether they function jointly, such that they work in conjunction with each other and the efficacy of one factor in driving passion is contingent on the presence or absence of another factor. To the extent that drivers of passion can potentially compensate for each other, this will not only enrich current perspectives on how passion predictors operate (i.e., separately or jointly), but also provide employees and managers multiple alternative pathways to cultivate passion, thereby allowing employers to adopt a more targeted and efficient approach to building employee passion.

Drawing on self-determination theory (SDT) (Deci & Ryan, 1985), which posits that motivation (i.e., one's energy, direction, and persistence of behavior) can arise from intrinsic or extrinsic forces (Gagné & Deci, 2005; Moran, Diefendorff, Kim, & Liu, 2012), we investigate the joint functions of two parallel antecedents of work passion – employees' intrinsic interest in the work itself, and their perceptions of the external organizational climate in which such work is done (in the form of cooperative psychological climate). While intrinsic and extrinsic forces can both manifest in autonomous, self-determined motivation (e.g., Deci & Ryan, 2000; Gagné & Deci, 2005), their motivational potential emerges from different sources. Intrinsic motivation stems from individuals' interest in and enjoyment of the work itself, whereas the motivational potential of psychological climate stems from the external work environment. Thus, we juxtapose both aspects to propose and test a compensatory model of passion predictors, whereby the presence of a cooperative psychological climate can compensate for a lack of intrinsic motivation in driving passion. In particular, because cooperative psychological climate encapsulates perceived cooperation displayed by various members of the organization (e.g.,

supervisors, coworkers) and encompasses a variety of resources (e.g., instrumental and social support), it is not only conceptually relevant but also practically important in presenting managers with multiple options for enhancing climate perceptions and, in turn, work passion.

Building on the dualistic model of passion which presents passion as either harmonious or obsessive in nature (Vallerand et al., 2003), we target our investigation toward predicting harmonious passion because it is more consistently associated with positive outcomes compared to its obsessive counterpart (Vallerand et al., 2014). Thus, the potential benefits ensuing from harmonious passion underscore the greater emphasis and urgency toward understanding how to enhance this form of passion. We also empirically validate such potential benefits by investigating two critical behavioral outcomes – task performance and discretionary helping behaviors – and testing the mediating role of harmonious passion in transforming the antecedents into behavioral consequences.

We test the proposed conceptual model in two disparate countries – Singapore and Brazil – so as to underscore the importance of work passion in different cultures and also provide a more informed and nuanced perspective on whether the proposed relationships hold true in different cultural contexts. In particular, compared to organizational research conducted in North America and Europe, studies investigating management and organizational practices in Singapore and Brazil are rarer, despite the growing presence of Asian and Latin American firms in the global marketplace. Thus, our findings can advance not only cross-national research on work passion but also our broader understanding of workplace practices, attitudes, and behaviors among relatively understudied employee populations.

Overall, our study makes the following contributions to the work passion literature. First, we address the relative dearth of research on predictors of work passion by not only presenting a

new predictor of harmonious passion – cooperative psychological climate, but also offering a more situated view of this predictor by considering how it operates in conjunction with intrinsic motivation. Adopting a compensatory approach to studying passion predictors advances extant theorizing in passion research by introducing the possibility that one factor may substitute or compensate for the relative lack of another in driving passion. Second, this research validates the work passion construct in societies with diverse cultural values, thereby providing credence to the notion that passion is not merely a Western-centric organizational phenomenon (Burke et al., 2015). In particular, to the extent that our study shows that harmonious passion predicts task performance and interpersonal helping behaviors in different countries and cultures, this will underscore the managerial imperative of promoting and sustaining employee passion cross-nationally. Finally, from a practical standpoint, our findings on how organizations can promote passion, even among those employees who are not intrinsically motivated by their work, offer viable alternative solutions for developing and managing employee passion.

Theoretical Development and Hypotheses

Dualistic Model of Passion and SDT

In the past decade, Vallerand and his colleagues developed a dualistic model of passion that stems from SDT and has been used to examine individuals' passion for various activities within and outside the work realm (e.g., Vallerand, 2015; Vallerand et al., 2003). Representing a motivational construct that explains individuals' energy, direction, and persistence of behavior (Pinder, 1998; Vallerand, 2015), passion comprises both an affective component (i.e., strong liking or love for an activity) and a cognitive one (i.e., perceived importance and significance of the activity) (Ho et al., 2011). In fact, because the activity for which the individual is passionate is so important to him/her, it becomes internalized into that individual's identity such that it

defines who he/she is. For instance, a person who is passionate about her work as a physician not only likes what she does but also considers it to be important to her self-concept and identity, such that she defines herself as a physician (among other roles that she plays).

Depending on how work is internalized into one's identity, two different forms of work passion can emerge. One is obsessive work passion, which is associated with a controlled form of internalization originating from intrapersonal or interpersonal pressures attached to work (e.g., social esteem stemming from one's work role) (Deci & Ryan, 2000; Vallerand et al., 2003). Because individuals with such passion experience a rigid form of activity pursuit such that they become controlled by work and feel a sense of compulsion to work, rather than freely choosing to do so, they typically report negative outcomes including depression and decreased psychological well-being and cognitive attention (Forest et al., 2011; Ho et al., 2011; Houlfort, Philippe, Vallerand, & Menard, 2014). Given our aim to understand how employees and organizations can harness the benefits of passion to facilitate positive workplace behaviors, we focus our emphasis on the second form of passion – harmonious passion – that has been linked to more favorable individual and organizational outcomes.

Harmonious work passion is associated with an autonomous internalization (Vallerand, 2015), whereby individuals freely and volitionally view work as important to their identities because of characteristics of the work itself (e.g., the work being challenging or meaningful). As such, they freely devote time and energy to their work, but nonetheless remain in control of their involvement such that it does not conflict with other aspects of their lives (Vallerand et al., 2003). Consequently, harmonious passion has been associated with positive outcomes such as enhanced psychological well-being, work engagement, and task performance (e.g., Forest et al., 2011; Ho & Astakhova, in press; Ho et al., 2011).

At the same time, harmonious passion has been conceptually and empirically distinguished from other common motivational constructs. In particular, while harmonious passion appears similar to intrinsic motivation (McAllister, Harris, Hochwater, Perrewe, & Ferris, 2017), passion scholars have strived to differentiate these two motivational constructs conceptually and empirically. Conceptually, harmonious passion goes beyond liking the activity to include "making it one of the central aspects of one's identity and life" (Vallerand, 2010, p. 102). Because harmonious passion includes an internalization component that is lacking in intrinsic motivation, the former is more strongly embedded into one's self-concept (Vallerand, 2010), and thus "has a superior motivational quality" (Liu et al., 2011, p. 296) and is more enduring than intrinsic motivation, which stems from the person-task interaction in the short-term (Ho & Astakhova, in press; Vallerand et al., 2003). Consequently, an individual can be intrinsically motivated by an activity without being passionate about it (Liu et al., 2011), and empirical evidence supports this distinction by demonstrating that harmonious passion has additional predictive value over intrinsic motivation in relation to outcomes such as positive affect and job creativity (e.g., Liu et al., 2011; Vallerand et al., 2003).

Another point of divergence between harmonious passion and intrinsic motivation is that even though both constructs engender liking for the activity, the source of such positive affect can differ between the two. Intrinsic motivation involves liking the activity because of the spontaneous pleasure and enjoyment from doing it (Deci & Ryan, 2000; Gagné & Deci, 2005), whereas for harmonious passion, liking can stem from such spontaneous pleasure or from other sources. For instance, even though a veterinary technician's work, such as washing soiled cages and cleaning animals' wounds, is not inherently interesting or pleasurable (i.e., low in intrinsic motivation), she may still love what she does and identify with it because she finds satisfaction

and meaning in relieving animals' suffering. Thus, harmonious passion can stem not only from intrinsic motivation but also from other aspects of the activity that make the individual derive satisfaction from, and be positively inclined toward, that activity. Tangential evidence for this can be gleaned from the finding that harmonious passion was positively correlated to autonomous motivation that entailed not only intrinsic motivation but also identified regulation (i.e., identifying with the importance of an activity to their personal goals and values) (Houlfort et al., 2014). More broadly, harmonious passion has also been distinguished from other motivational constructs and work attitudes such as work engagement and job satisfaction (e.g., Ho & Astakhova, in press; Vallerand, 2015), primarily because harmonious passion comprises both affective and cognitive elements that do not co-occur in other seemingly similar constructs.

Because work internalization represents a critical element underlying the passion construct, SDT, with its focus on two key forms of activity internalization (autonomous vs. controlled), presents an especially appropriate framework within which to examine passion and its predictors (Vallerand, 2010). Going beyond the traditional notions of intrinsic and extrinsic motivation, SDT proposes that human motivation can be more broadly differentiated into autonomous and controlled forms (Deci & Ryan, 2000; Howard, Gagné, Morin, & Van den Broeck, 2016; Van den Broeck, Lens, De Witte, & Van Coillie, 2013). While intrinsic motivation is most commonly associated with autonomous motivation, other forms of autonomous motivation exist, such as when individuals voluntarily undertake an activity because it is important to their personal goals and values (i.e., identified regulation), or because they have fully integrated that activity with other aspects of their self (integrated regulation). These constitute autonomous motivation in that individuals engage in the activity out of their own volition and have autonomously internalized the reasons for doing it (i.e., "want to" rather than

"have to") (Howard et al., 2016; Moran et al., 2012; Sheldon & Elliot, 1998). In contrast, certain forms of motivation are controlled in nature, in that they reflect behaviors that are controlled by external factors. These include doing something for reward or to avoid punishment (external regulation), or because of feelings of guilt, anxiety, or threat to self-worth (introjected regulation) (Deci & Ryan, 2000). More broadly, the distinction between autonomous and controlled forms of motivation in SDT provides the foundation for, and correspond to, the distinction between harmonious and obsessive passion in the dualistic model (Vallerand et al., 2003).

Of particular relevance in this study is SDT's premise on how to facilitate autonomous motivation, namely by satisfying individuals' basic psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2014). Autonomy need relates to having a sense of choice in making decisions and initiating actions, while competence need relates to being successful at challenging tasks and attaining desired outcomes, and relatedness need pertains to having fulfilling relationships with others (Baard, Deci, & Ryan, 2004). To the extent that engaging in an activity fulfills these basic needs, individuals will be more likely to autonomously internalize the activity into their identity, thereby experiencing harmonious passion (Vallerand, 2015). Recent empirical research provides preliminary support for this argument, in that needs satisfaction was found to positively relate to harmonious passion across four different samples (Lalande et al., 2017). Building on this fundamental premise, we next explicate how the extrinsic factor of cooperative psychological climate can facilitate harmonious work passion, independent of intrinsic motivation for the work itself.

Cooperative Psychological Climate and Harmonious Passion

A key premise of SDT is that the social context can play a key role in either satisfying or thwarting individuals' needs (Deci & Ryan, 2014; Ryan & Deci, 2000), and scholars have

explicitly noted that individuals' perceptions of the external environment are important to work passion (McAllister et al., 2017). In particular, research has alluded to the role of interpersonal climate in satisfying such needs and promoting autonomous internalization (e.g., Baard et al., 2004; Deci, Connell, & Ryan, 1989; Gagné & Deci, 2005), and we focus specifically on cooperative psychological climate. Formally defined, cooperative psychological climate captures an individual's perception of the extent to which employees work with one another to accomplish organizational goals and emphasize personal effort toward group outcomes as opposed to individual outcomes (Collins & Smith, 2006; Fisher, 2014). Psychological climate differs from organizational climate in that the former is an *individual* attribute reflecting the individual's perceptions and interpretation of the environment, whereas the latter is an *organizational or group* attribute reflecting multiple employees' shared perceptions of the organization (James & Jones, 1974; Schneider, 1990). In reflecting how individuals perceive and interpret their organizational environment, psychological climate is more relevant to the present study as it is employees' perceptions of, rather than actual features in, the environment that are more predictive of their reactions to environmental forces (James, James, & Ashe, 1990; James & Jones, 1974). In fact, meta-analytical findings show that psychological climate perceptions consistently and reliably predict a wide range of employee attitudes and behaviors (Benzer & Horner, 2015; Parker et al., 2003), and play an important intervening role in connecting environmental attributes to individual responses.

Building on SDT, we posit that a cooperative psychological climate will facilitate employees' harmonious passion. Employees experiencing cooperative psychological climate have been found to report greater positive emotions (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2012), more positive social exchange perceptions (Kuvaas & Dysvik, 2011), and

increased knowledge exchange (Collins & Smith, 2006). These positive interpersonal exchanges not only enhance individuals' liking for their work (i.e., the affective component of harmonious passion) and fulfill their relatedness needs, but also provide them with task-related support and resources to complete their tasks, troubleshoot problems, and solve work issues, thereby meeting competence needs (Kühnel, Sonnentag, & Bledow, 2012). Further, insofar as such perceived supportive context fosters trust and allows individuals to take risks and exercise discretion at work, it facilitates their self-determination and promotes an autonomous rather than controlled form of internalization (Deci, Eghrari, Patrick, & Leone, 1994; Jungert, Koestner, Houlfort, & Schattke, 2013). Accordingly, these reasons suggest that individuals who perceive a cooperative psychological climate will be more likely to experience harmonious work passion than those who do not.

Hypothesis 1: Cooperative psychological climate is positively related to harmonious passion.

Compensatory Function of Cooperative Psychological Climate

We also offer a more fine-grained perspective to the hypothesized main relationship by incorporating intrinsic motivation as a contingent factor and proposing that cooperative psychological climate will play a compensatory function, such that it facilitates harmonious passion particularly among employees with low intrinsic motivation. This derives from SDT's premise that autonomous forms of motivation can stem from either intrinsic or extrinsic sources (Howard et al., 2016; Moran et al., 2012), and to the extent that intrinsic motivation is lacking, extrinsic factors can nonetheless serve to fulfill psychological needs and enhance harmonious passion (Vallerand, 2015). More broadly, the notion that individuals' perceptions of both the work environment and the work itself can shape their attitudes and behaviors is a longstanding

one (e.g., Bartol & Manhardt, 1979; Shalley, Gilson, & Blum, 2000), as is the idea that each of these factors can compensate for the lack of the other in shaping individual outcomes – commonly referred to as a compensatory model (e.g., Friesen, Kay, Eibach, & Galinsky, 2014; Kehr, 2004). The fundamental premise derives from the compensatory resources model and substitution hypothesis, which contends that "when a given resource is absent a second resource may substitute for it" (Hobfoll & Lieberman, 1987, p. 20).

We extend this compensatory model to the context of harmonious passion. In prior studies, intrinsic motivation has been found to be positively associated with harmonious passion (e.g., Houlfort et al., 2014; Liu et al., 2011), because when individuals derive spontaneous pleasure from performing their work, such intrinsic motivation constitutes one source of the affective (liking) component of passion (Vallerand et al., 2003). While intrinsic motivation lacks the cognitive (internalization) component of passion, it nonetheless engenders an internal locus of causality and a sense of spontaneity and volition (Van den Broeck et al., 2013; Vansteenkiste & Ryan, 2013), thereby aligning with individuals' autonomy needs. Thus, while intrinsic motivation is distinct from harmonious passion, the former is nonetheless positively related to the latter by virtue that intrinsic motivation satisfies the liking component and also engenders a sense of autonomy in engaging in that work.

More importantly, we expect that among intrinsically motivated employees, cooperative psychological climate will not play as important a role in predicting harmonious passion, given that their intrinsic motivation already contributes to their liking for, and sense of autonomy in, performing their work. This is akin to the threshold effect documented in other contexts, whereby perceived increases of resources above some point have no further effect in driving employee outcomes such as innovative behaviors (e.g., Scott & Bruce, 1994). When intrinsic

motivation is low, however, the compensatory resources model would predict that cooperative psychological climate will be instrumental in compensating for the lack of intrinsic motivation and providing extrinsic resources and support that contribute toward harmonious passion, as described in the previous section. For such workers, their work is important to and internalized by them not because it is interesting, but because the social climate in which work is done helps foster a sense of liking and autonomous work valuation and identification (Gagné & Deci, 2005). In essence, a cooperative climate can provide an alternative route through which non-intrinsically motivated employees' psychological needs can still be met so as to foster their harmonious passion. SDT scholars have, in fact, alluded to the possibility of such a compensatory effect by noting that activities that are deemed uninteresting (i.e. lacking in intrinsic motivation) are best promoted by autonomous forms of extrinsic motivation (i.e., cooperative psychological climate in the current context) (Gagné & Deci, 2005; Losier & Koestner, 1999). Together, these arguments imply that intrinsic motivation serves as a boundary condition under which cooperative psychological climate can be more predictive of harmonious passion (i.e., when intrinsic motivation is low) or less predictive (when intrinsic motivation is high).

Hypothesis 2: Intrinsic motivation moderates the positive relationship between cooperative psychological climate and harmonious passion such that the relationship is stronger at lower levels of intrinsic motivation.

Harmonious Passion as Mediator to Behavioral Outcomes

To the extent that cooperative psychological climate predicts harmonious passion (particularly when intrinsic motivation is low), we predict that harmonious passion will then serve a mediating function to translate such climate into performance outcomes. In the

psychological climate literature, it remains indeterminate whether a cooperative psychological climate can facilitate performance. While a study by Kuvaas and Dysvik (2011) found that a cooperative climate did not predict employees' work effort, work quality, or citizenship behavior, other studies examining a broader conceptualization of psychological climate (including facets other than perceived cooperation from coworkers) found that such climate results in higher job involvement and, in turn, greater work effort and performance (Brown & Leigh, 1996). Meta-analytic results replicate the latter finding, in that psychological climate shaped performance outcomes (including task performance and citizenship behaviors) via employee attitudes (e.g., job satisfaction, commitment) and, in turn, motivation (Parker et al., 2003). Building on these findings, we examine whether the motivational construct of harmonious passion serves as the linking mechanism that translates cooperative psychological climate into employee performance.

Specifically, empirical evidence in the work passion literature demonstrates that harmonious passion facilitates both in-role task performance and, to a lesser extent, discretionary work behaviors (e.g., Burke et al., 2015; Dubreuil, Forest, & Courcy, 2014). Because such passion promotes higher cognitive engagement at work (Ho et al., 2011) and the setting of mastery goals that focus on developing one's competence and task mastery (Vallerand et al., 2008; Vallerand et al., 2007), harmoniously passionate employees tend to exhibit superior task performance. The relationship between harmonious passion and discretionary behaviors, on the other hand, is more equivocal. In one study conducted in China and Russia, harmonious passion positively predicted OCB in the former but negatively so in the latter (Burke et al., 2015). In another study based on a Russian sample, harmonious passion had an inverted-U shaped relationship with OCB (Astakhova, 2015). These mixed findings may, in part, be due to the

overly broad nature of the OCB construct (Cook & Campbell, 1979; Ones & Viswesvaran, 1996), which encompasses citizenship behaviors targeted at multiple constituents such as the supervisor, coworkers, and organization. Thus, to reduce such noise and to provide a more targeted examination of the link between harmonious passion and discretionary behaviors, we focus on a more specific, narrower type of discretionary behavior – interpersonal helping of coworkers. This builds directly from prior passion research indicating that passion is a proximal predictor of one's interpersonally-directed behaviors.

In contexts within and outside of work, harmonious passion has been associated with positive interpersonal relationships with others (e.g., coworkers and teammates), because such passion yields positive emotions that enhance one's closeness and relationship satisfaction with them (Ho & Pollack, 2014; Philippe, Vallerand, Houlfort, Lavigne, & Donahue, 2010). Accordingly, this can increase the individual's willingness to help others. Additionally, harmonious passion can enhance one's ability to help. Because harmoniously passionate employees feel competent about what they do (Halvari, Ulstad, Bagøien, & Skjesol, 2009), they may perceive themselves as being able to help others. Further, given that work is seen as being in harmony with other aspects of life, harmoniously passionate individuals may experience less conflict between their work and non-work roles and thus have "more excess resources to reinvest … in extra-role behaviors" rather than in resolving inter-role conflicts (Astakhova, 2015, p. 364). As such, we expect that harmoniously passionate workers will engage in interpersonal helping.

Finally, building on prior research documenting motivation as the mediating mechanism between psychological climate and performance (Brown & Leigh, 1996; Parker et al., 2003), we expect that harmonious passion will link cooperative psychological climate (and its interaction

with intrinsic motivation) to employees' task performance and interpersonal helping. This is premised on the argument that psychological climate provides an important source of information that shapes individuals' motivation and need fulfillment, as detailed previously (James, Hartman, Stebbins, & Jones, 1977; Parker et al., 2003). In turn, major motivational theories stipulate that one's evaluation of such motivational aspects then determines the behaviors that individuals take on and regulate (e.g., Baumeister & Vohs, 2004; Vroom, 1964). Taken together, the above discussion leads to the following hypotheses:

Hypothesis 3: Harmonious passion is positively related to supervisor-rated (a) task performance; and (b) interpersonal helping.

Hypothesis 4: Harmonious passion mediates the positive relationship between cooperative psychological climate and (a) task performance; and (b) interpersonal helping.

Hypothesis 5: Harmonious passion mediates the relationship between the interaction of cooperative psychological climate and intrinsic motivation and (a) task performance; and (b) interpersonal helping.

To provide strong validation of the proposed model, we test the hypothesized relationships with employees in two countries differing in geographic, economic, and cultural contexts. Singapore is one of the smallest countries in Southeast Asia with one of the highest GDP per capita in the world (over US$52,000 in 2016), and whose cultural values fall under the Confucian Asian cluster, characterized by its high performance orientation and institutional and in-group collectivism (House et al., 2004). Brazil, on the other hand, is the largest country in South America and one of the largest economies in Latin America and the world (US$1.796 trillion in 2016; GDP per capita of US$8,650 in 2016). It is categorized in the Latin American

cultural cluster, which is distinguished by its high in-group collectivism and its low institutional collectivism, performance orientation, uncertainty avoidance, and future orientation (House et al., 2004). The differences between these two countries provide the foundation on which to test the validity and cross-national generalizability of the proposed model. In particular, while the national differences suggest that different results may emerge, one of the key premises of SDT is that psychological needs are universal necessities that transcend national and cultural boundaries, and to the extent that such universal needs are satisfied, individuals will experience more autonomous forms of motivation and positive psychological and behavioral outcomes despite cross-cultural differences (Baard et al., 2004; Deci & Ryan, 2014; Deci et al., 2001). Accordingly, this suggests that the hypothesized relationships will be similar between the two samples despite the country differences, and by testing whether the results will replicate, we seek to further ascertain the cross-national applicability of SDT.

Methods

Participants and Procedures

Data were collected from 417 employees and their supervisors in a multinational corporation in the transportation and logistics industry. The organization focused on executing projects for energy, logistics, and infrastructure development through leveraging on technology, and the data were from its operational units in Singapore and Brazil. At the time of data collection, the firm had 1,835 and 1,354 full-time employees in Singapore and Brazil respectively, and the employees worked in diverse job functions including design, operations, marketing, and other support functions. We used a simple random sampling method where a sample of between 30 to 40 employees from various ranks and hierarchical levels, ranging from

mid-level management to junior executives from each department, was invited to participate in the study.

We conducted a questionnaire-based survey with the selected employees at their respective offices. The survey was administered in English for the Singaporean employees, because the primary language of education and business in Singapore is English. For the Brazilian employees, the survey was administered in Portuguese after following translation and back-translation procedures from the original English survey (Brislin, 1970). Of the 243 Singaporean employees sampled, 197 (81.1%) returned fully completed questionnaires, while of the 302 Brazilian employees sampled, 220 (72.8%) returned fully completed questionnaires. We also obtained supervisor-rated data on employees' task performance and helping. Among the Singaporean employees (17.8% female), the average organizational tenure was 6.32 years (*SD* = 2.57). Most of them had obtained at least a Bachelor's degree (91.9%), and the remaining 8.1% had obtained a high school diploma. Among the Brazilian employees (16.9% female), average organizational tenure was 4.36 years (*SD* = 3.85). Most of them had obtained at least a Bachelor's degree (71.4%), one-fourth of them had obtained a high school diploma, and the remaining 3.6% had less than high school education.

Measures

Participants responded to the items on a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*), unless otherwise indicated. Cronbach's alphas for the measures are presented in Table 1, together with the descriptive statistics and correlations.

Cooperative psychological climate. This was measured with five items adapted from Chatman and O'Reilly's (2004) study, which originally measured perceived cooperation within one's work team. We substituted "the members in my organization" for "team" in order to

measure cooperative climate in the organization as a whole. Sample items include "The members in my organization try to reach a consensus on important decisions," and "The members in my organization pull together for a common goal."

Intrinsic motivation. We used Gagné and colleagues' Motivation at Work scale (2010) to measure participants' intrinsic work motivation. This scale consists of three items that reflect reasons for performing one's work (e.g., "because I enjoy this work very much"), and participants indicated, on a seven-point scale ranging from 1 (*not at all*) to 7 (*exactly*), the extent to which each item corresponded to their own reason for doing work.

Harmonious passion. We measured participants' harmonious work passion using the passion scale developed by Vallerand and colleagues (2003), adapted to the work context. This form of passion was measured with seven items (e.g., "My work allows me to live a variety of experiences").

Task performance and interpersonal helping. Participants' task performance and interpersonal helping toward coworkers were evaluated by their supervisors. Task performance was measured with four items developed by Williams and Anderson (1991), and sample items include "adequately completes assigned duties," and "fulfills responsibilities specified in job description". Interpersonal helping was measured with three items from Williams and Anderson's (1991) interpersonal OCB scale asking about one's helping toward coworkers, and a sample item is "helps others who have heavy workloads".

Control variables. Because the dualistic model of passion also comprises obsessive passion, we included this form of passion in testing the proposed model so as to provide a more rigorous analysis as well as to demonstrate that the specific form of passion matters. In particular, we modeled obsessive passion at the same stage in the model as harmonious passion

(i.e., as an intermediate construct between the predictors and behavioral outcomes), given the lack of conceptual basis on which to expect obsessive passion to predict harmonious passion or vice versa. Additionally, testing both forms of passion at the same stage allows for comparability and differentiation between the two constructs, and by demonstrating that their linkages to the predictors and outcomes are different, we provide further evidence that the two forms of passion are indeed distinct. Obsessive passion was measured with the seven items developed by Vallerand and colleagues (2003) (e.g., "I cannot live without my work").

We also controlled for supervisor autonomy support, based on prior findings that perceived autonomy support by supervisors facilitates the autonomous internalization of the passionate activity and, accordingly, harmonious passion (Mageau et al., 2009), This was measured with Moreau and Mageau's (2012) nine items (e.g., "My supervisor gives me many opportunities to make decisions in my work"). We also controlled for extrinsic motivation (i.e., external regulation), so as to empirically distinguish this from intrinsic motivation. We used the three extrinsic motivation items from the Motivation at Work scale (Gagné et al., 2010), with a sample item being "I'm doing my current job because it allows me to make a lot of money". Finally, we measured respondents' organizational tenure and gender (1 = male, 0 = female) as control variables, based on previous findings that these variables related to task performance and helping (e.g., Eagly & Crowley, 1986; Tsui & O'Reilly, 1989).

Results

Measurement Model

Because the respondents worked for the same organization but across two countries, we first assessed the cross-cultural equivalence of the measurement model comprising eight latent factors – supervisor autonomy support, extrinsic motivation, intrinsic motivation, cooperative

psychological climate, harmonious passion, obsessive passion, task performance, and interpersonal helping –and their respective indicators (Byrne, 2008). Model fit was assessed with chi-square (χ^2), comparative fit index (CFI), incremental fit index (IFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). A model typically considered as having an acceptable fit to the data has CFI and IFI values of .90 or above (Bentler, 1992; Hu & Bentler, 1999), a RMSEA value of .10 or less (Browne & Cudeck, 1993), and a SRMR value of .08 or less (Hu & Bentler, 1999). We tested for both configural and metric equivalences (Vandenberg, 2002) and following Byrne's (2008) and Cheung and Rensvold's (2002) recommendations, we used ΔCFI as a more practical approach than $\Delta\chi^2$ to determine the statistical difference between the configural and metric equivalence models. A ΔCFI of .01 or less suggests that the constraints specified in the more restrictive model hold (i.e., the measurement model has metric equivalence between the two groups).

In order to achieve metric equivalence, we dropped three items of harmonious passion ("For me my work is a passion that I still manage to control"; "I am completely engrossed with my work"; and "My work is in harmony with other activities in my life") and three items of obsessive passion ("My mood depends on me being able to do my work"; "I have a tough time controlling my need to do my work"; and "I have almost an obsessive feeling for my work"). The configural equivalence model had an adequate fit (χ^2 = 1626.03, *df* = 1064, CFI = .92, IFI = .92, RMSEA = .04 (90% CI [.03, .04]), SRMR = .06), as did the metric equivalence model (χ^2 = 1704.68, *df* = 1091, CFI = .91, IFI = .91, RMSEA = .04 (90% CI [.03, .04]), SRMR = .06). Thus, we concluded that the configural and metric equivalence models did not differ as ΔCFI (= .008) was less than .01. While we recognize that dropping these items risked altering the meaning of the scales, this risk was mitigated by the fact that in Vallerand's (2015) revised

passion scale, four of the items (i.e., the first two items listed above for each scale) were also deleted or revised, and yet the revised scale was still highly correlated (above .80) with the original scale (Vallerand, 2015). As further evidence that dropping these items did not alter the validity of the scales or the findings, we conducted robustness checks by testing the proposed model using the original seven-item measure of each passion scale and found that the hypothesized relationships were consistent with those using the shortened scales (results available from authors).

We then conducted confirmatory factor analysis (Anderson & Gerbing, 1988) to differentiate among the above eight constructs and compare the proposed eight-factor model to more parsimonious seven-factor models. We found that the eight-factor model fit the data well (χ^2 = 1642.12, *df* = 532, CFI = .93, IFI = .93, RMSEA = .08 (90% CI [.08, .08]), SRMR = .07) and had a better fit than any of the seven-factor models ($\Delta\chi^2$s $\geq$ 28.35, *df*s = 7, *p*s < .001), thereby showing that the eight constructs were empirically distinct.

Hypothesis Testing

We conducted separate path analyses for the Brazilian and Singaporean samples in AMOS to evaluate the fit of the path models, and to compare whether the results were similar in both samples. We also conducted the mediation tests using Hayes' (2013) PROCESS macro script coupled with 5,000-replication bootstrapping, which generated a bias-corrected 90% confidence interval ($CI_{90\%}$) for each indirect effect of interest.

Brazilian sample. We tested the main-effects-only path model (without the interaction between cooperative psychological climate and intrinsic motivation) as well as the full path model (which included the interaction term; see Figure 1). The main-effects-only path model had an adequate fit (χ^2 = 26.15, *df* = 8, CFI = .96, IFI = .96, RMSEA = .10 (90% CI [.06, .15]),

SRMR = .05), as did the full path model (χ^2 = 26.68, *df* = 10, CFI = .96, IFI = .97, RMSEA = .09 (90% CI [.05, .13]), SRMR = .05). In the main-effects only model, cooperative psychological climate was positively related to harmonious passion (*b* = .11, *SE* = .05, *p* < .05), supporting H1. Harmonious passion was, in turn, positively related to supervisor-rated task performance (*b* = .16, *SE* = .06, *p* < .05) and interpersonal helping (*b* = .20, *SE* = .09, *p* < .05), consistent with H3a and H3b. The mediation tests also showed that harmonious passion mediated the relationships between cooperative psychological climate and task performance (indirect effect = .012, bootstrap *SE* = .010, $CI_{90\%}$ [.0004, .036]) and between cooperative psychological climate and interpersonal helping (indirect effect = .018, bootstrap *SE* = .015, $CI_{90\%}$ [.001, .054]). Therefore, H4a and H4b were both supported.

The full path model that included the interaction of cooperative psychological climate and intrinsic motivation is presented in Figure 1, which shows that the interaction term was negatively related to harmonious passion (*b* = -.07, *SE* = .03, *p* = .01). The interaction is depicted in Figure 2, and a simple slopes test (Hayes, 2013) revealed that the relationship between cooperative psychological climate and harmonious passion was stronger when intrinsic motivation was low (-1 *SD*) (*b* = .18, *SE* = .05, *p* < .001) than when it was high (+1 *SD*) (*b* = .01, *SE* = .06, *p* = .85), consistent with H2. Further, as predicted in H5a, the indirect relationship between cooperative psychological climate and task performance was moderated by intrinsic motivation and mediated by harmonious passion (moderated mediation index = -.008, bootstrap *SE* = .007, $CI_{90\%}$ [-.026, -.0003]). Specifically, when intrinsic motivation was low, harmonious passion mediated the relationship between cooperative psychological climate and task performance (indirect effect = .019, bootstrap *SE* = .016, $CI_{90\%}$ [.001, .054]), but when intrinsic motivation was high, harmonious passion did not have a significant mediation effect (indirect

effect = .001, bootstrap *SE* = .008, $CI_{90\%}$ [-.009, .019]). Likewise, the indirect relationship between cooperative psychological climate and interpersonal helping was moderated by intrinsic motivation and mediated by harmonious passion (moderated mediation index = -.012, bootstrap *SE* = .011, $CI_{90\%}$ [-.037, -.0001]). When intrinsic motivation was low, harmonious passion mediated the link between cooperative psychological climate and interpersonal helping (indirect effect = .028, bootstrap *SE* = .023, $CI_{90\%}$ [.001, .076]), but when intrinsic motivation was high, harmonious passion did not have a significant mediation effect (indirect effect = .002, bootstrap *SE* = .012, $CI_{90\%}$ [-.013, .027]), as predicted in H5b.

Singaporean sample. Similar to the Brazilian sample, the main-effects-only path model for the Singaporean sample had an adequate fit (χ^2 = 19.58, *df* = 8, CFI = .96, IFI = .96, RMSEA = .09 (90% CI [.04, .14]), SRMR = .04), as did the full path model (Figure 3: χ^2 = 19.82, *df* = 10, CFI = .97, IFI = .97, RMSEA = .07 (90% CI [.02, .12]), SRMR = .04). In the main-effects-only path model, cooperative psychological climate was positively related to harmonious passion (*b* = .14, *SE* = .07, $p < .05$), consistent with H1. However, harmonious passion was not significantly related to supervisor-rated task performance (*b* = -.01, *SE* = .06, *p* = .83) or interpersonal helping (*b* = .04, *SE* = .07, *p* = .56), contrary to H3a and H3b. In turn, harmonious passion also did not mediate the relationship between cooperative psychological climate and task performance (indirect effect = -.006, bootstrap *SE* = .012, $CI_{90\%}$ [-.035, .006]) or between cooperative psychological climate and interpersonal helping (indirect effect = .001, bootstrap *SE* = .012, $CI_{90\%}$ [-.016, .025]). Therefore, neither H4a nor H4b was supported.

The full path model including the interaction of cooperative psychological climate and intrinsic motivation is presented in Figure 3. Consistent with H2, the interaction of cooperative psychological climate and intrinsic motivation was negatively related to harmonious passion (*b* =

-.14, *SE* = .06, $p < .01$), and the interaction is depicted in Figure 4. The simple slopes test showed that the relationship between cooperative psychological climate and harmonious passion was stronger when intrinsic motivation was low (-1 *SD*) (*b* = .26, *SE* = .09, $p < .01$) than when it was high (+1 *SD*) (*b* = -.01, *SE* = .09, $p = .94$). However, because harmonious passion was not related to either behavioral outcomes, it also did not mediate the link between the interaction term and these outcomes (for task performance outcome: moderated mediation index = .005, bootstrap *SE* = .009, $CI_{90\%}$ [-.006, .025]; for interpersonal helping outcome: moderated mediation index = -.001, bootstrap *SE* = .010, $CI_{90\%}$ [-.017, .016]). Therefore, neither H5a nor H5b was supported in the Singaporean sample.

Discussion

Consistent with the premises of SDT and a compensatory approach to passion predictors, we find support for the role of cooperative psychological climate in facilitating harmonious passion among employees with low intrinsic motivation. The fact that these findings were documented in two geographically, economically, and culturally distinct countries further underscore their cross-national generalizability. More broadly, these findings enrich the nomological network of harmonious passion by not only shedding light on cooperative psychological climate as a new predictor, but also providing a nuanced, multifaceted perspective where passion predictors operate interdependently such that one can compensate for the lack of another. In doing so, we address recent calls for work passion research to examine how passion can be developed by individual factors and their interaction (Vallerand et al., 2014). Further, the findings that harmonious passion facilitated both supervisor-rated task performance and interpersonal helping among Brazilian employees, and mediated the links between psychological climate (and its interaction with intrinsic motivation) and the two outcomes, underscore the

performance benefits of harmonious passion and its role in translating employee perceptions of the work environment into behaviors. Contrary to expectations, however, harmonious passion among Singaporean employees did not enhance task performance or interpersonal helping, thereby also failing to play a mediating role in linking psychological climate to these behavioral outcomes. We discuss below the specific contributions and implications of this research to the work passion literature, and offer tentative explanations for why harmonious passion did not predict work behaviors in Singapore.

Research Implications

Predicting harmonious work passion. The first contribution relates to our investigation of a new predictor of harmonious work passion – cooperative psychological climate, which adds to the fledging but limited body of works on passion predictors. In particular, we go beyond extant studies that primarily emphasize autonomy support as a predictor (e.g., Liu et al., 2011; Mageau et al., 2009) to show that even after accounting for this and intrinsic motivation, cooperative psychological climate offers additional predictive value among both Brazilian and Singaporean workers, despite national and cultural differences between the two groups. This demonstrates that the broader social environment, as perceived by employees, constitutes a salient contextual factor beyond the influence of the supervisor and one's intrinsic interest in the work. More fundamentally, this underscores the notion that multiple alternative pathways exist through which harmonious passion can be enhanced. Thus, this finding not only adds to the list of passion predictors but also suggests that this list can be expanded to include other contextual factors and resources that, in different ways, contribute to harmonious passion.

At the same time, this study illustrates that not all predictors play equal and independent roles in shaping harmonious passion, thereby offering a second contribution to extant passion

research. By adopting a compensatory approach to examining the joint functions of passion predictors, we found that intrinsic motivation played a boundary condition in the link between cooperative psychological climate and harmonious passion, such that climate compensated for low intrinsic motivation to promote harmonious passion. In the context of passion research, this finding not only validates the SDT premise that motivation can stem from intrinsic or extrinsic sources, but is also noteworthy in demonstrating that harmonious passion may have an upper threshold: once an individual's intrinsic motivation is sufficient to enhance harmonious passion, other predictors may not be as effectual. This finding extends the prevailing tendency to examine passion predictors independently by offering a more differentiated view, one where predictors can operate jointly such that not all predictors are necessary, and some can substitute or compensate for others. This also sets the stage for researchers to adopt a more holistic viewpoint that considers the joint, interdependent functions of such predictors, and for managers to consider the larger work context when deciding on the best route to enhance employee passion.

Behavioral outcomes of work passion. A third contribution of this research stems from our demonstration that harmonious work passion not only predicted task performance and interpersonal helping in Brazil, but also played a mediating role in linking cooperative psychological climate and its interaction with intrinsic motivation to such behavioral outcomes. This finding not only validates prior contention that motivation helps to translate psychological climate into performance (Brown & Leigh, 1996; Parker et al., 2003), but also shows that this holds true even for more fine-grained facets of psychological climate, namely cooperative climate. Additionally, the fact that harmonious passion positively related to interpersonal helping in Brazil sheds light on prior mixed findings on the link between harmonious passion and broader measures of OCB (Astakhova, 2015; Burke et al., 2015). Specifically, to the extent that

the reach of harmonious passion is circumscribed to more interpersonal, narrower domains of citizenship behaviors, this may account for why it is not as consistently predictive of broader forms of OCB that span multiple different constituents (e.g., supervisors, organization).

The finding that harmonious passion did not predict task performance or interpersonal helping in Singapore (and, by implication, failed to mediate the link between cooperative psychological climate and these outcomes) also warrants discussion. While aspects of national culture may potentially account for the null results in Singapore, we believe this to be unlikely given that Ho and colleagues' (2011) study found a positive link between harmonious passion and performance among Singaporean workers, albeit from a different organization in a different industry. Similarly, Burke and colleagues (2015) found that harmonious passion was positively related to task performance and OCB in China, a Confucian Asian society (House et al., 2004). Thus, we speculate that aspects specific to the Singaporean operational unit may account for the null relationships. Specifically, compared to the Brazilian unit, the Singaporean unit has a more authoritarian culture where the senior leadership makes key decisions and dictates most actions, and employees are expected to obey orders and take directions without much discussion or input. Because the unit culture discourages and constrains individual discretion and action, the behavioral benefits of such passion may be precluded from manifesting even if an employee were harmoniously passionate. In contrast, the culture in the Brazilian unit is less authoritarian and more laissez-faire in nature, with the management team having a less hierarchical, top-down relationship with the employees and allowing for more freedom and discretion in how employees carry out their work. To the extent that the relative lack of normative constraints allows for the benefits of harmonious passion to be manifested, this may account for why harmonious passion was positively linked to both performance outcomes in Brazil and not in Singapore. Nonetheless,

we acknowledge that these reasons are speculative in nature, and we encourage subsequent research to explore the roles of potential moderators that may constrain the performance benefits of harmonious passion from surfacing.

Practical Implications

Our findings offer several practical implications for organizations seeking to develop employees' harmonious passion. As a general prescription, we recommend that managers need not attend to passion predictors on every front, but should instead adopt a more holistic yet selective strategy. By first evaluating the extent to which subordinates' perceptions toward their work, colleagues, supervisors, and the larger organization jointly satisfy their psychological needs that promote harmonious passion, and then targeting only those aspects (e.g., cooperation among workers) that are particularly suited for compensating for other lacking areas (e.g., intrinsic motivation), managers may more efficiently and effectively nurture passion. In particular, we offer some specific strategies for developing a cooperative work environment that can enhance workers' perceptions of the work climate and, in turn, their harmonious passion.

First, the recruitment and selection process should not only assess candidates' technical skills but also their ability and inclination to work with others. Second, beyond selection decisions, structural and leadership mechanisms can build and reinforce a cooperative psychological climate. Structural mechanisms can entail appraisal, reward, and promotion systems that incentivize interpersonal cooperation in the firm, while leadership mechanisms can entail organizational leaders enacting and exemplifying cooperative behaviors in order to shape organizational norms. Finally, recognizing that such organizational investments are not without costs, we recommend that managers target such investments toward those employees who lack intrinsic motivation, or those whose jobs are not inherently interesting.

Limitations and Directions for Future Research

The current research is not without limitations. First, we are unable to establish causality given that the data are not experimental or longitudinal in nature. Thus, we cannot rule out the possibility that employees with superior performance become harmoniously passionate as a result of the positive feedback they receive, or that harmoniously passionate workers who help others then perceive that other organizational members are also helpful to them. Notwithstanding these possible arguments, our proposed relationships are underscored by strong conceptual reasoning as well as prior empirical evidence, thereby offering confidence as to their validity.

Because the psychological nature of some constructs (psychological climate, passion) necessitates the use of self-reports, we are unable to eliminate the risk of common method variance (CMV). However, this risk, if present, affects only the first hypothesis, given that CMV attenuates rather than inflates interaction effects like that proposed in Hypothesis 2 (Siemsen, Roth, & Oliveira, 2010), and the other hypotheses are assessed with supervisor-rated outcome measures. Furthermore, if CMV were indeed prevalent in this research, we would have found significant relationships between all self-reported variables, which was not the case here (e.g., supervisor autonomy support did not predict obsessive passion). Thus, this pattern of results supports researchers' contention that the inflation of observed correlations due to CMV "is a possibility and not a necessity" (Chan, 2009, p. 318), and that the problem of CMV is likely exaggerated (Williams, Cote, & Buckley, 1989).

Finally, our conceptual model is limited to examining two passion predictors and their interaction. While there are numerous factors that can drive harmonious passion, our choice of predictors derives directly from SDT, which recognizes the motivational potential of both intrinsic and extrinsic factors (Deci & Ryan, 1985). Additionally, practical and statistical

concerns dictate that any study be limited to a manageable subset of constructs (Cohen, 1990). Notwithstanding, we acknowledge that the current pattern of findings may not fully replicate to other predictors, and we emphasize the need to build a larger, more systematic body of works investigating passion predictors. In particular, because passion can also be driven by individual differences such as autonomy and controlled personality orientations (e.g., Vallerand et al., 2006), future research can examine how such individual factors operate jointly with environmental factors (e.g., characteristics of the leader, team, organization) to promote harmonious passion.

Accordingly, we urge future research to pursue this line of inquiry. Further, we recommend that research be conducted in other countries and across different organizations, particularly given the potential moderating role of organizational culture and constraints that restrict the performance benefits of harmonious passion from surfacing. More broadly, to the extent that research can replicate and/or extend the conceptual model to different organizations and countries, particularly those whose cultural values differ significantly from the two countries examined here, this would strengthen the validity and generalizability of the model. Finally, we encourage research to investigate instances where passion predictors can play complementary rather than compensatory roles, such that one predictor accentuates rather than substitutes for the role of another predictor. Together, these will allow the work passion field to make substantive steps toward understanding passion predictors.

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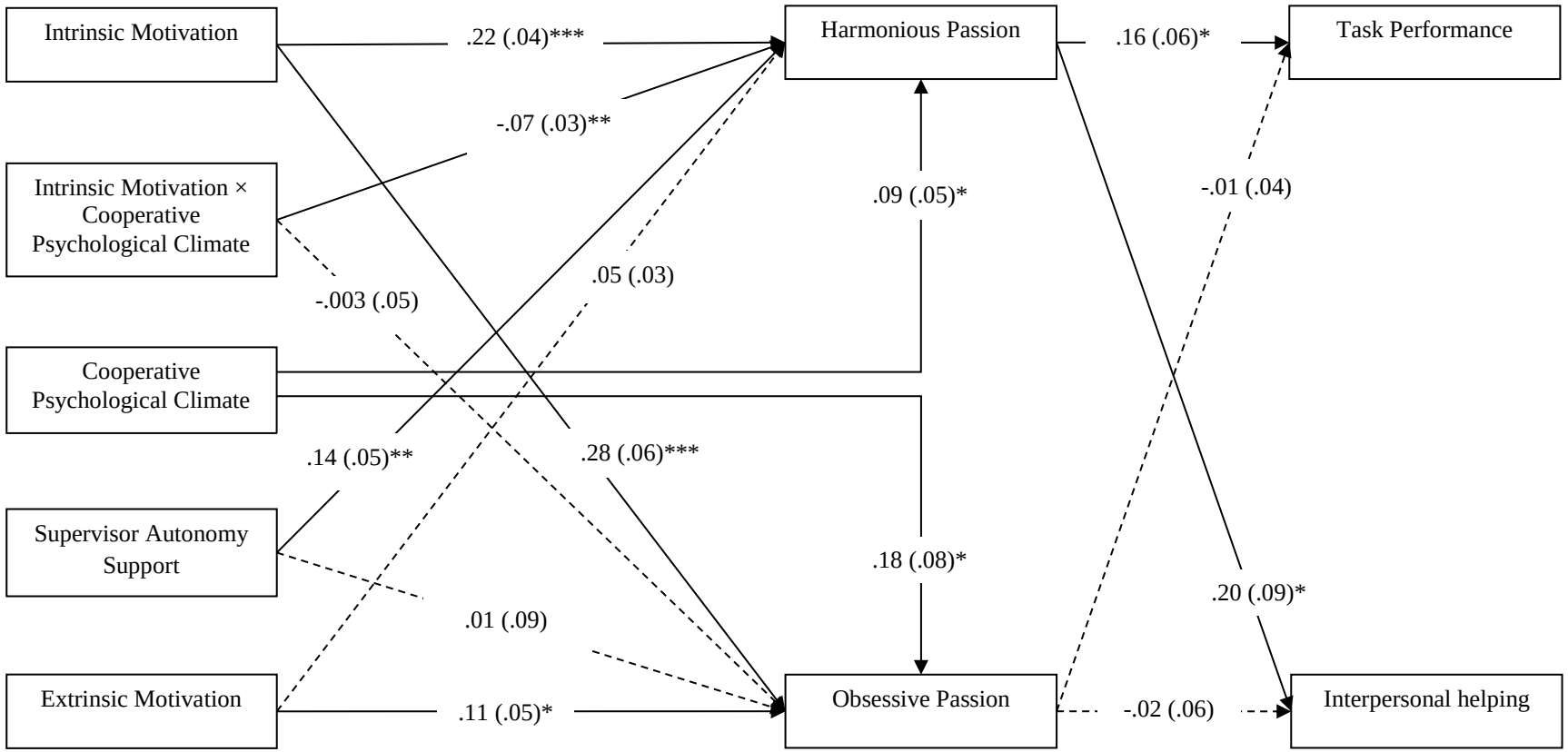
Table 1

Descriptive Statistics and Correlations

Sample	Variable	*M*	*SD*	1	2	3	4	5	6	7	8
Brazil	1. Harmonious passion	4.36	.63	.77							
(*N* = 220)	2. Obsessive passion	3.14	.96	.42***	.84						
	3. Intrinsic motivation	5.19	1.14	.56***	.42***	.74					
	4. Extrinsic motivation	4.33	1.29	.32***	.26***	.40***	.82				
	5. Cooperative psychological climate	3.56	.88	.39***	.31***	.30***	.26***	.83			
	6. Supervisor autonomy support	3.95	.73	.36***	.20**	.25***	.20**	.53***	.86		
	7. Task performance	4.57	.55	.18**	.07	.14*	.22***	.24***	.26***	.91	
	8. Interpersonal helping	4.34	.74	.16*	.05	.03	.19**	.14*	.24***	.62***	.71
Singapore	1. Harmonious passion	3.91	.61	.84							
(*N* =197)	2. Obsessive passion	2.55	.76	.13	.83						
	3. Intrinsic motivation	4.78	1.08	.60***	.19**	.90					
	4. Extrinsic motivation	4.27	1.08	.02	.12	.17*	.82				
	5. Cooperative psychological climate	3.69	.53	.37***	.02	.40***	.16*	.80			
	6. Supervisor autonomy support	3.79	.47	.37***	.01	.39***	.15*	.45***	.83		
	7. Task performance	4.37	.48	.01	.09	.03	-.09	.10	.05	.86	
	8. Interpersonal helping	3.97	.56	.07	.06	.03	-.12	.15*	.20**	.56***	.80

Note. Harmonious passion and obsessive passion were assessed with their respective four-item measures. Alphas in each sample are presented in the diagonals. * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 1. Results of Full Path Model for Brazilian Sample



Notes. Model fit: χ^2 = 26.68, *df* = 10, CFI = .96, IFI = .97, RMSEA = .09, SRMR = .05. The presented coefficients are unstandardized, and standard errors are in parentheses. All the error covariances among the exogeneous variables, the covariance between the disturbance terms of harmonious passion and obsessive passion, and the covariance between the disturbance terms of task performance and helping were modeled but not shown here for the sake of presentation clarity. For the same reason, the figure did not include paths from the control variables of gender and organizational tenure to the two passion variables and the two outcome variables, all of which were not statistically significant. * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 2. Intrinsic Motivation as a Moderator in the Relationship between Cooperative Psychological Climate and Harmonious Passion (Brazilian Sample)

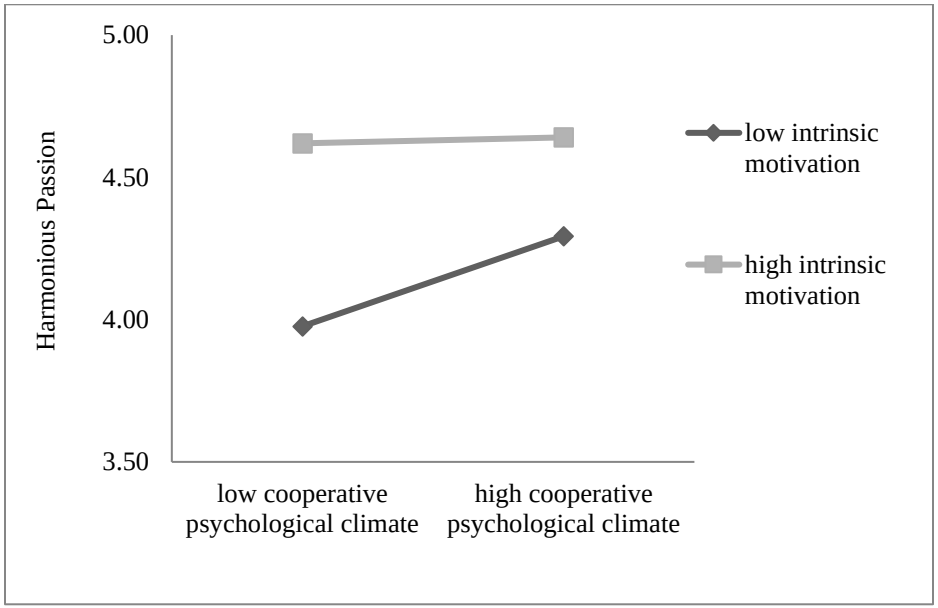
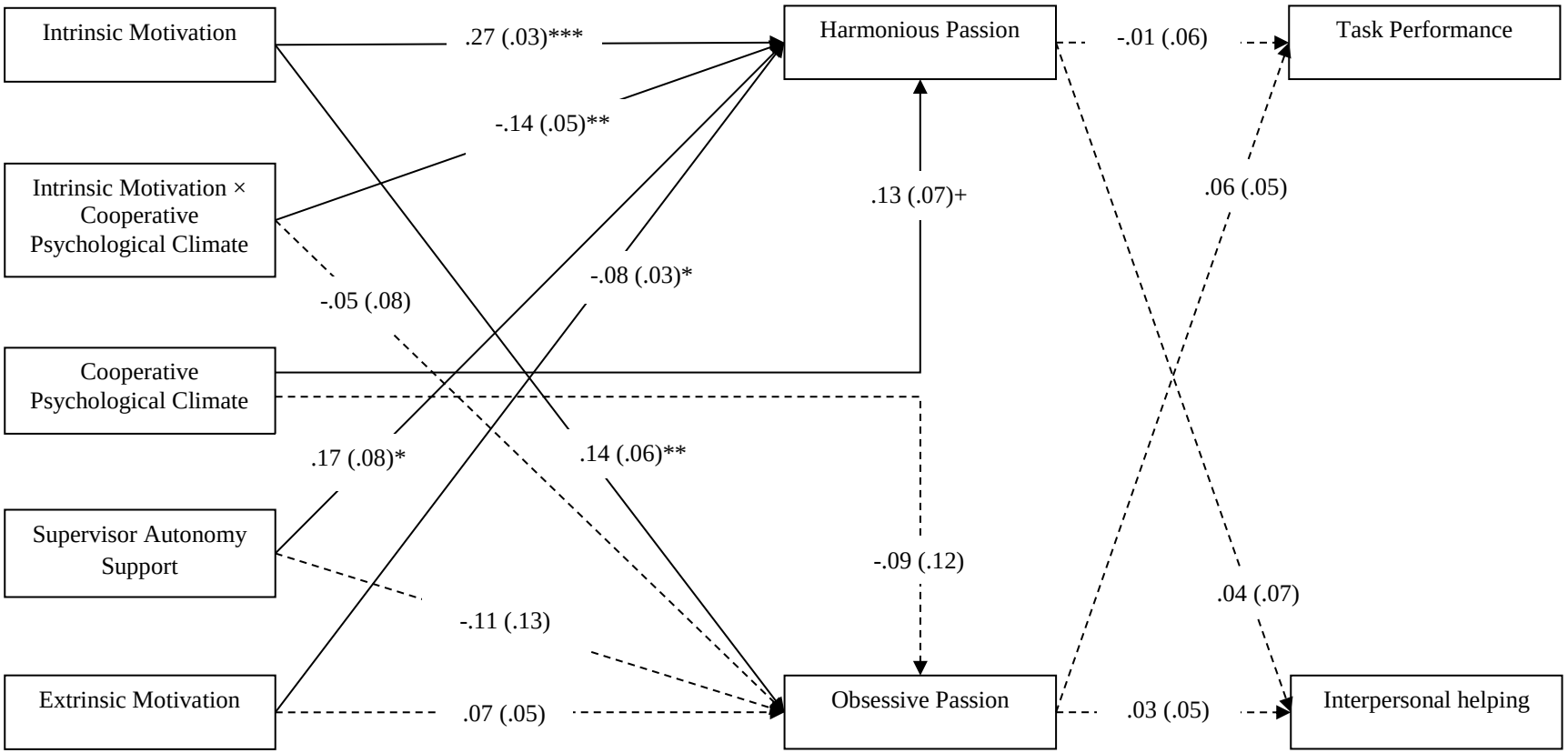


Figure 3. Results of Full Path Model for Singaporean Sample



Notes. Model fit: χ^2 = 19.82, *df* = 10, CFI = .97, IFI = .97, RMSEA = .07, SRMR = .04. The presented coefficients are unstandardized, and standard errors are in parentheses. All the error covariances among the exogeneous variables, the covariance between the disturbance terms of harmonious passion and obsessive passion, and the covariance between the disturbance terms of task performance and helping were modeled but not shown here for the sake of presentation clarity. For the same reason, the figure did not include paths from the control variables of gender and organizational tenure to the two passion variables and the two outcome variables, all of which were not statistically significant except for the path from gender to harmonious passion (*b* = .22, *SE* = .09, *p* = .01). + *p* < .10; * *p* < .05; ** *p* < .01; *** *p* < .001.

Figure 4. Intrinsic Motivation as a Moderator in the Relationship between Cooperative Psychological Climate and Harmonious Passion (Singaporean Sample)