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The Role of Discrete Emotions in Job Satisfaction: A Meta-Analysis

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RESEARCH ARTICLE

The role of discrete emotions in job satisfaction: A meta-analysis

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Summary

The relationship between emotions and job satisfaction is widely acknowledged via affective events theory (AET). Despite its widespread use, AET was not designed to address why specific emotions might differentially relate to job satisfaction. We utilize appraisal theory of emotion to refine AET and provide this nuanced theorizing. We meta-analytically test our ideas with 235 samples across 99 883 individuals and 22 600 intra-individual episodes. We test two approaches—specific emotion experiences (16 discrete emotions) versus general emotion experiences (positive or negative emotions)—and present empirical evidence of their similarities and differences with job satisfaction. Our findings suggest that specific emotions with circumstance-agency appraisals (e.g., depression and happiness) have the strongest associations with job satisfaction compared to emotions with self- and other-agency appraisals and general emotion experiences. However, more variability is observed for negative emotions and job satisfaction compared to positive emotions. Further, we address and even challenge influential critiques of emotions and job satisfaction via a meta-analytic test of five moderators—emotion intensity versus frequency, target of emotion, job satisfaction measure, level of analysis, and time referent for emotion and job satisfaction recall. In sum, we advance academic and practitioner understanding of the relationship between emotions and job satisfaction.

KEYWORDS

affective events theory, emotion, job satisfaction, meta-analysis

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1 | INTRODUCTION

Job satisfaction has long captured the attention of academics and practitioners given its relationships with important outcomes like performance, organizational citizenship behaviors, deviance, and turnover (e.g., Harrison et al., 2006; Judge et al., 2001, 2020; Kinicki et al., 2002; Riketta, 2008). As organizations grapple with major global events (e.g., the COVID-19 pandemic, inflation, supply chain issues, and social and political movements), there is continued interest in employees' satisfaction as well as their emotions at work. For example, a report on the impact of the COVID-19 pandemic found that 40% of employees in the United States perceived diminished job quality (Gallup, 2020). Further, some popular press articles identify employees' emotions and satisfaction with their jobs (or lack thereof) as contributing factors to the so-called "Great Resignation" (Thompson, 2021). Thus, advancing our understanding of emotions and job satisfaction remains critically important for organizations.

In the organizational sciences, the introduction of affective events theory (AET: Weiss & Cropanzano, 1996) produced a paradigm shift that emphasized the importance of affective reactions to work events. While previous work focused mainly on cognitive judgments, the introduction of AET highlighted the role of emotions in influencing attitudes (e.g., job satisfaction) and behaviors. As noted by the authors, "AET presented a 'macrostructure' for understanding emotions in the workplace" (Weiss & Beal, 2005, p. 2), and since 1996, AET has been utilized by researchers to provide justification for studying emotions at work. Although valuable, the literature applying AET is characterized by three trends that limit a full understanding of the relationship between workplace emotions and job satisfaction.

The first limitation is that AET is "not a testable theory" (Weiss & Beal, 2005, p. 1), and its generality makes it difficult to falsify (Popper, 1989). AET argues that affect at work influences evaluations of the job (Weiss & Cropanzano, 1996). This proposition lacks specificity and, thus, studies invoking AET are all but guaranteed to find "support" for any relationship between emotion and job satisfaction. In regard to this generality, Weiss and Beal et al. (2005) noted:

"AET presented a 'macrostructure' for understanding emotions in the workplace. The expectation was that the macrostructure would help guide research so that, over time, its 'arrows' could be replaced with process explanations. Microstructures would develop out of focused research. 'Explanation' was yet to come."

(2005, p. 2)

We argue it is time to move beyond the "macrostructure" of AET, which was intended to provide a general framework, and toward the "microstructures" that explain why affective reactions at work influence cognitive judgments. Without microstructures grounded in theory, research has focused on *what* the relationship between emotion and job satisfaction is rather than understanding *why* the relationship between these constructs exists.

Relatedly, the second limitation is the theoretical and empirical ambiguity regarding the similarities and differences between *specific* emotion experiences (i.e., discrete emotions, such as anger, guilt, or pride) and *general* emotion experiences (i.e., positive or negative emotions) at work and how these emotion experiences are related to job satisfaction. This lack of clarity can cause a great deal of confusion and may lead researchers to make erroneous conclusions. For example, anger, depression, and guilt (i.e., specific emotion experiences) may be grouped together and examined as negative emotions (i.e., general emotion experiences). However, theoretical reasons for this grouping are lacking as these discrete emotions have distinct appraisal patterns and motivational tendencies that are washed away when combined as general negative emotion (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987).

The third limitation, and one that likely occurred in part because best practices for affect and emotion research have evolved over time, is the use of splintered conceptualizations and operationalizations of emotions across studies. Emotions are short-lived affective reactions to specific events or entities (Fisher, 2000; Frijda, 1986; Lazarus, 1991; Weiss & Cropanzano, 1996). Thus, emotions differ from mood and trait affect as mood is a less intense, prolonged affective state lacking a specific trigger, whereas trait affect is the stable disposition to experience certain emotions across one's lifespan (Fisher, 2000; Gohm & Clore, 2002; Watson et al., 1988; Weiss & Cropanzano, 1996). Despite the theoretical differences between these affective constructs, they are often used interchangeably, both theoretically and operationally, making it challenging to infer conclusions regarding the accumulated state of the science.

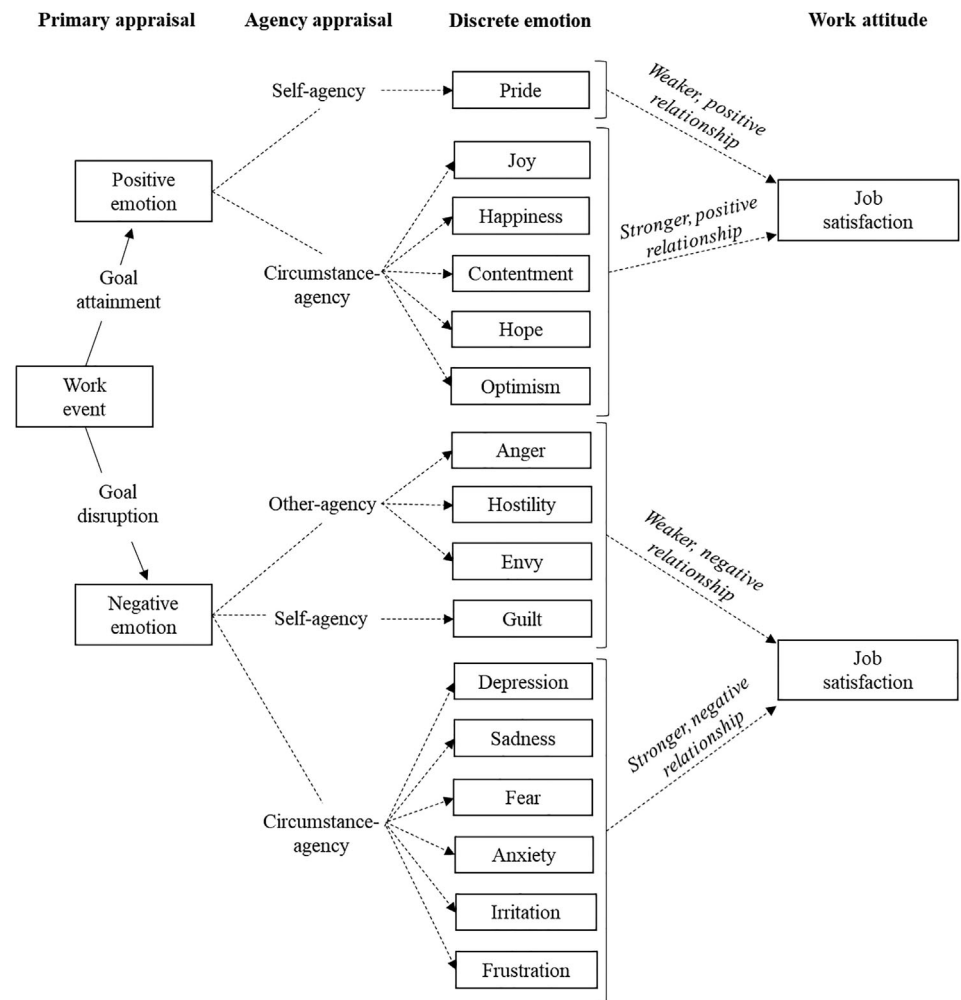
Taken together, the current state of the emotions and job satisfaction literature is characterized by a great deal of ambiguity. Further, this area of research is continually expanding and marked by inconsistent findings (e.g., effect sizes for the relationship between anxiety and job satisfaction range from 0.10 to -0.70 : Ferris et al., 1996; Waung, 1995).¹ To provide clarity and set direction for the future of research on this topic, we present the first comprehensive meta-analysis of workplace emotions and job satisfaction with 235 independent samples across 99 883 individuals and 22 600 intra-individual episodes.² In doing so, we provide four contributions to the scholarly conversation in this domain and for practice.

First, we refine the AET macrostructure (Weiss & Cropanzano, 1996) by building the microstructures of the relationships between 16 discrete emotions and job satisfaction. We draw on appraisal theory of emotion (Frijda, 1986; Lazarus, 1991; Lazarus & Folkman, 1984; Ortony et al., 1988; Roseman, 2001, 2011, 2013; Shaver et al.,

¹Our Web of Science topic search (emotion + "job satisfaction") of articles, proceeding papers, review articles, book chapters, and books shows a four-fold increase in research over the past decade compared to the previous decade. The search yielded 1027 returns (01/01/2013–12/31/2022) compared to 250 returns (01/01/2003–12/31/2012).

²We acknowledge that other meta-analyses have been conducted. However, our approach differs in important ways. Connolly and Viswesvaran (2000) focused explicitly on positive and negative trait affect (e.g., individual differences in emotions in general). Thoresen et al. (2003) focused on trait and state positive and negative affect, with state affect operationalized as mood and emotion combined into one affect variable categorized by valence. Both meta-analyses included personality traits (extraversion and neuroticism) in their operationalizations of affect.

FIGURE 1 The macrostructure and microstructure of emotions and job satisfaction.



1987), which suggests the experience of specific discrete emotions is defined in part by a person's unique cognitive appraisals of an event. One such appraisal is the agency appraisal where a person attributes blame for the event to the self, a specific target (e.g., person, group, or organization), or to the circumstance/situation (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). We focus on agency appraisals as a parsimonious explanatory mechanism for the relationships between discrete emotions and job satisfaction (see Figure 1). By building these microstructures through the theoretical lens of agency appraisals, we explain *why* some discrete emotions are more strongly related to job satisfaction than others, which is a level of specificity not addressed in AET (Weiss & Cropanzano, 1996).

Our second contribution is the meta-analytic test of a core relationship in AET (Weiss & Cropanzano, 1996): Employees' emotion experiences at work are related to their job satisfaction judgments. Given the inconsistencies in emotion terminology and measurement in the literature, we operationalize emotion according to the theoretical definition of emotion—an affective reaction to specific events or entities (Fisher, 2000; Frijda, 1986; Lazarus, 1991; Weiss & Cropanzano, 1996). Thus, we only include studies that measure emotion with a work-related event referent (e.g., “on the job” or “interaction with supervisor”). This allows us to provide meta-analytic empirical

evidence for the relationship between emotions and job satisfaction in the often-cited AET (Weiss & Cropanzano, 1996).

Third, we test two different conceptualizations of emotion experience in our meta-analytic work to reflect the current state of the literature: specific emotion experiences (i.e., discrete emotions, such as anxiety, frustration, and joy) and general emotion experiences (i.e., emotions grouped together as “positive emotions” and “negative emotions”). Using the appraisal theory lens, specific emotion experiences arise from specific appraisals whereas general emotion experiences are comprised of multiple emotions of the same valence with mixed appraisals (Frijda et al., 1989; Lazarus, 1991; Lazarus & Folkman, 1984; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Thus, testing the relationship between general emotion experiences and job satisfaction is theoretically distinct from testing specific emotion experiences (Barsade et al., 2003; Barsade & Gibson, 2007; Elfenbein, 2007; Gooty et al., 2009). While the theoretical differences are clear between these two approaches, we provide meta-analytic evidence for the similarities and differences in *empirical* relationships between job satisfaction and these differing conceptualizations of emotions. This allows us to evaluate how the emotions and job satisfaction literature has been shaped and continues to be shaped by distinct emotion conceptualizations.

Our fourth contribution is the meta-analytic test of five substantive and methodological moderators of the emotions–job satisfaction relationships. Numerous influential reviews and critiques highlight critical issues in the emotions and job satisfaction domains (Diener et al., 1985; Fisher, 2000; Gooty et al., 2009; Judge et al., 2017, 2020; Judge & Klinger, 2008; Robinson & Clore, 2002a, 2002b). Given the inconsistent findings regarding the relationship between emotions and job satisfaction, we draw from these works to examine meaningful moderators. Substantively, emotion experiences may demonstrate differential relationships with job satisfaction when conceptualized as frequency versus intensity or by the specific target of the emotion (e.g., supervisor and team member). Methodologically, specific job satisfaction measures, level of analysis (intra-individual and individual), and time referents for emotion and job satisfaction recall may influence the relationship between emotions and job satisfaction. By examining these moderators, we present accumulated empirical evidence to support and also challenge prior critiques and highlight the need for precision in research designs. Common across our four contributions, our meta-analytic work advances a more nuanced understanding of the relationship between emotions and job satisfaction that is useful for academics and practitioners alike.

2 | JOB SATISFACTION AND EMOTIONS

Job satisfaction has been defined in different ways since its original conception in the 1930s (Barsade et al., 2003; Judge et al., 2017, 2020; Judge & Klinger, 2008). Although both affective and cognitive components are seen as integral to the core construct of job satisfaction (Brief, 1998; Judge et al., 2017, 2020; Judge & Ilies, 2004; Judge & Klinger, 2008), the predominant focus in the organizational science literature is the cognitive component of job satisfaction (see Judge et al., 2017, for a review). Thus, we define job satisfaction as an evaluative judgment of one's overall job (Judge et al., 2017, 2020; Weiss, 2002; Weiss & Cropanzano, 1996). Although job satisfaction can be studied at the facet level (e.g., satisfaction with supervision versus satisfaction with the work itself), the literature on emotions and job satisfaction predominantly focuses on an individual's overall judgments of job satisfaction (via global and multi-faceted measures). Thus, we focus our hypothesis building on emotions and overall job satisfaction.

AET (Weiss & Cropanzano, 1996) introduced the theoretical macrostructure that events at work elicit affective reactions which, in turn, influence a range of attitudinal and behavioral outcomes. We focus on a core relationship within the AET framework—the relationship between emotion and job satisfaction. AET posits that affective experiences with a target object influence general evaluations of that target object. Thus, affective experiences on the job will influence general evaluations of the job (i.e., overall job satisfaction). AET is built on appraisal theory of emotion (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). We use appraisal theory to guide our focus on “microstructures” (Weiss & Beal, 2005)

in AET and explain the linkages between specific emotions and job satisfaction (see Figure 1).

Appraisal theorists posit that the experience of specific discrete emotions is comprised of a two-stage appraisal of affective events—a primary and secondary appraisal (Ellsworth & Smith, 1988; Lazarus & Folkman, 1984; Roseman & Smith, 2001; Smith, 1991). In the primary appraisal, individuals appraise an event in terms of goal relevance or disruption. That is, when a work event occurs, individuals appraise whether the event aligns with their valued goals or if it disrupts such valued goals. With goal congruence, a positively valenced affective state ensues; conversely, when a goal is disrupted, a negatively valenced affective state occurs (Lazarus & Folkman, 1984; Weiss & Cropanzano, 1996).

In the secondary appraisal, different combinations of appraisals converge to differentiate specific discrete emotions. In other words, a theoretical assumption of appraisal theory is these secondary appraisals must occur in order to elicit a specific discrete emotion (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Notably, the elicitation and experience of emotion is complex, and appraisal theorists differ on the number of appraisal dimensions present in the secondary appraisal (although significant conceptual overlap exists: e.g., Frijda, 1986; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013; Roseman & Smith, 2001; Scherer, 1993). Because emotions are complex and momentary phenomena (Gooty et al., 2009), we adopt the most parsimonious explanation of their association with job satisfaction by only focusing on one secondary appraisal that is consistent across various appraisal theories—the agency appraisal (sometimes called “responsibility”: Frijda et al., 1989; Lazarus, 1991, Ortony et al., 1988; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Our focus on agency appraisals is also supported by prior research, which suggests that the valence and agency appraisals account for the most variance in the evaluation of an affective event compared to other appraisal dimensions (e.g., Butt et al., 2005; Smith & Ellsworth, 1985).

Agency appraisals attribute responsibility for an event to the self, a specific target (e.g., person and organization), or to circumstance (e.g., situational, no specific causal attribution; Roseman, 2001, 2011, 2013). These agency appraisals contribute to the differentiation of discrete emotions of the same valence. For example, an employee may appraise an event at work, such as receiving poor performance feedback, as disrupting their goals (e.g., receiving a raise or a promotion). In this case, the employee's primary appraisal elicits a negative affective state. However, different discrete emotions can arise depending on to *whom or what* the employee assigns responsibility for the poor performance. They may blame (a) their own inattention to tasks as the cause (self-agency) and experience guilt, (b) their supervisor's lack of support as the cause (other-agency) and experience anger, or (c) the complexity of the task as the cause (circumstance-agency) and experience frustration (Roseman, 2001, 2011, 2013). In all three scenarios, a negative emotion was experienced, but the agency appraisal differentiated the discrete emotion experiences. Thus, the agency appraisal holds valuable insight for academics and practitioners as to why specific emotions may differentially relate to judgments of job satisfaction.

The agency appraisal is a key tenet of all appraisal theories and can help move our theoretical and practical understanding of

emotions and job satisfaction forward. Management and applied psychology have used the valence and agency appraisals to explain why specific emotions differentially influence information processing, consumer decision making, and negotiation behavior (e.g., Agrawal et al., 2013; Butt et al., 2005; Butt & Choi, 2006; Han et al., 2014; So et al., 2015). This body of work states that agency appraisals in discrete emotion experiences prime individuals to focus on the stimuli in their agency appraisal. Depending on the nature of the agency appraisal (self-, other-, or circumstance-), this can have different implications for focal outcomes. In the sections that follow, we adopt this focus on agency appraisals as a parsimonious explanation and build the microstructure for why specific emotions of the same valence may differentially influence job satisfaction judgments.

2.1 | Specific negative emotions and job satisfaction

We used Shaver et al.'s (1987) emotion taxonomy to identify the most frequently studied negative discrete emotions in the job satisfaction literature. To be included, at least three empirical studies had to examine the discrete emotion in question. Our systematic review resulted in 10 negative discrete emotions: anger, hostility, envy, guilt, anxiety, depression, fear, frustration, irritation, and sadness. Prior research supports valence congruence between affect and judgments of job satisfaction (see Connolly & Viswesvaran, 2000 and Thoresen et al., 2003 for meta-analytic reviews). As such, we expect specific emotions with a negative valence will be negatively related to job satisfaction. However, we expect the strength of these negative relationships to vary based on the agency appraisal of the specific emotion. Below, we define each negative emotion based on the appraisals required for elicitation and their motivational tendencies.

2.1.1 | Circumstance-agency appraisal

According to appraisal theory (Frijda et al., 1989; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013; Shaver et al., 1987), depression, sadness, anxiety, fear, and frustration all share a circumstance-agency appraisal (Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Thus, the experience of these emotions does not require a causal attribution to a specific entity; rather, the overarching situation or circumstance is the focus. Depression and sadness both occur in response to a goal-incongruent event composed of irrevocable loss (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Both emotions are low arousal and motivate inaction or withdrawal from the environment. Although depression is typically discussed in the mental health domain as a clinical disorder, our focus on depression as a discrete emotion is aligned with the Shaver et al. (1987) emotion taxonomy. A key differentiator between depression and sadness as emotions is depression involves an appraisal of loss generalized to one's whole life, whereas sadness is contained to the event at hand (Lazarus, 1991).

Anxiety and fear both arise from potential threat or harm; fear is elicited from a concrete threat, whereas anxiety is elicited from a more existential threat (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Both fear and anxiety motivate individuals to move away or withdraw from the threat. Frustration and irritation both arise in response to obstacles to current motives (Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013). In the organizational sciences, a large body of work focuses on frustration as an emotional reaction to situational constraints in the work environment that is associated with diffuse aggression (Fox & Spector, 1999; Peters & O'Connor, 1980; Storms & Spector, 1987). Irritation, on the other hand, is an emotion elicited from obstacles to current motives that remove positive incentives from goal attainment (Mohr et al., 2006).

2.1.2 | Other- and self-agency appraisals

Anger, hostility, and envy share an other-agency appraisal in which a target person or entity caused a goal-incongruent event (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). For anger and hostility, the goal-incongruent event is deemed unfair, with both emotion experiences motivating action to right the wrongdoing (Eckhardt et al., 2004; Frijda et al., 1989; Gibson & Callister, 2010; Lazarus, 1991; Ortony et al., 1988; Shaver et al., 1987). Anger and hostility differ in that anger is not always destructive (Geddes & Callister, 2007; Gibson & Callister, 2010), whereas hostility is higher intensity and always contains a destructive component in the form of a desire to inflict harm (Eckhardt et al., 2004). Envy occurs in response to a target other's success and motivates individuals to seek out the envied target with intentions to destroy them and their success (Frijda et al., 1989; Lazarus, 1991; Neu, 1980; Ortony et al., 1988; Salovey, 1991). Guilt has a self-agency appraisal in which a person blames their own behavior for causing a goal-incongruent event (Frijda, 1993; Roseman, 2013; Tangney, 1995; Tangney et al., 2007). The experience of guilt is associated with prosocial motives to make reparations for one's behavior (Tangney, 1995; Tangney et al., 2007).

2.1.3 | Hypothesis development

Using appraisal theory of emotion (Frijda et al., 1989; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013; Shaver et al., 1987), we refine AET (Weiss & Cropanzano, 1996) and posit that relationships between emotions and overall job satisfaction vary as a function of the self-, other-, and circumstance-agency appraisals (see Figure 1). This is because the specific agency appraisals associated with distinct emotions activate corresponding cognitions which, in turn, influence judgments (Agrawal et al., 2013; Butt et al., 2005; Butt & Choi, 2006; Han et al., 2014; Lerner & Keltner, 2000; So et al., 2015). Here, we expect circumstance-agency negative emotions to demonstrate stronger negative associations with overall job satisfaction than self- and

other-agency negative emotions. Circumstance-agency negative emotions prime a focus on the role of broader, situational conditions at work as disruptive to one's valued goals, whereas self- and other-agency negative emotions prime a more narrow focus upon a specific person or entity as disrupting valued goals (Agrawal et al., 2013; Han et al., 2014; Lerner & Keltner, 2000). Given that overall job satisfaction is an evaluative judgment regarding the favorability of one's job as a whole (i.e., multiple facets of the job: Judge et al., 2017), we propose that the broader cognitive focus of circumstance-agency negative emotions is more strongly related to the range of judgments that compose overall job satisfaction. Conversely, we expect the narrower cognitive focus of self- and other-agency emotions to be less strongly related to the range of judgments in overall job satisfaction.

Note that we are not suggesting discrete emotions with circumstance-agency are generalized. Indeed, all discrete emotions are tied to a specific affective event and these events vary. Circumstance-agency emotions can even stem from events involving target people. For example, an employee may be frustrated because their work demands have increased as a result of a coworker's leave of absence. In this scenario, the coworker is a target person tied to the affective event; however, frustration ensues as a result of the increased work demands on the employee (i.e., as a result of the situation). In sum, appraisal theory of emotion (Frijda et al., 1989; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013; Shaver et al., 1987) suggests that circumstance-agency negative emotions arise from broader, situational conditions in an affective event. This in turn accentuates the role of the circumstance/situation for goal disruption (Agrawal et al., 2013; Butt et al., 2005; Butt & Choi, 2006; Han et al., 2014; Lerner & Keltner, 2000; Roseman, 2001, 2011, 2013; So et al., 2015), which is more strongly related to the wider range of judgments that compose overall job satisfaction compared to self- and other-agency negative emotions with a more narrow focus for goal disruption.

Hypothesis 1. Circumstance-agency negative emotions (depression, fear, frustration, sadness, irritation, and anxiety) will have stronger negative associations with overall job satisfaction than self- and other-agency negative emotions (guilt, anger, hostility, and envy).

2.2 | Specific positive emotions and job satisfaction

Using Shaver et al.'s (1987) emotion taxonomy as a guide, our systematic review identified six frequently studied (i.e., at least three empirical studies) positive discrete emotions in the job satisfaction literature: joy, happiness, contentment, hope, optimism, and pride. We expect valence congruence between positive emotions and judgments of overall job satisfaction based on previous reviews of affect and satisfaction (Connolly & Viswesvaran, 2000; Thoresen et al., 2003). Thus, we expect that specific positive emotions will be positively related to

job satisfaction. However, we also expect the nature of the relationships between positive emotions and job satisfaction to vary based on the agency appraisal (see Figure 1).

2.2.1 | Circumstance-agency appraisal

According to appraisal theory of emotion, joy, happiness, contentment, hope, and optimism are all comprised of a circumstance-agency appraisal (i.e., no causal attribution to a target entity: Frijda et al., 1989; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013). Joy, happiness, and contentment arise from a realized affective event that is congruent with an employee's goals (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Given the lack of causal attribution, the motivational tendency for joy, happiness, and contentment is to exhibit unfocused positivity. These three emotions are differentiated by their level of intensity, with joy being the most intense reaction to a realized goal and contentment being the least intense reaction (Lazarus, 1991).

Hope and optimism are elicited in response to an unrealized, future situation that aligns with goal attainment (Frijda et al., 1989; Lazarus, 1991; Ortony et al., 1988; Roseman, 2001, 2011, 2013). They differ in that optimism arises when a person appraises a higher level of certainty in the future event (Lazarus, 1991, 2000). The motivational tendency for hope and optimism is to approach the future event; however, given the lower certainty for the experience of hope, hope is more likely to motivate increased effort compared to optimism (Lazarus, 1991, 2000; Snyder et al., 1996).

2.2.2 | Self-agency appraisal

Notably, only one positive discrete emotion without circumstance-agency is commonly studied in the job satisfaction literature—pride. The experience of pride requires a self-agency appraisal in which the employee credits themselves, or the groups they identify with, as causing an affective event that is congruent with their goals (Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987; Tyler & Blader, 2003). Pride is associated with increased confidence and self-esteem, with a motivational tendency to seek out recognition and maintain continued achievement (Lazarus, 1991; Ortony et al., 1988; Weiss et al., 1999).

2.2.3 | Hypothesis development

Similar to our logic for negative emotions, we hypothesize that the circumstance-agency appraisal required for the experience of joy, happiness, contentment, hope, and optimism will prime employees to focus on situational stimuli in their work environment that promote goal attainment (Agrawal et al., 2013; Butt et al., 2005; Butt & Choi,

2006; Han et al., 2014; So et al., 2015). We expect this broader focus on workplace situational conditions as a means for goal attainment to be more strongly related to the range of judgments in overall job satisfaction compared to self-agency positive emotion that primes a narrower cognitive focus on the self (or groups one identifies with) as the source of goal attainment. In sum, we hypothesize:

Hypothesis 2. Circumstance-agency positive emotions (joy, happiness, contentment, hope, and optimism) will have stronger positive associations with overall job satisfaction than self-agency positive emotion (pride).

2.3 | General emotion experiences and job satisfaction

It is common in research on emotion and job satisfaction for scholars to aggregate emotions of the same valence into general negative or positive emotion experiences. Typically, this aggregation is not grounded in the theoretical structure of specific discrete emotions (e.g., using appraisal theory of emotion to group emotions by appraisals); rather, emotions are often selected based on their inclusion in popular workplace affect measures (e.g., PANAS or PANAS-X as modified for emotion research: Watson et al., 1988). Further, the macrostructure of AET (Weiss & Cropanzano, 1996) is often invoked when scholars propose that employees' affective experiences (i.e., emotions) will influence evaluations of the job (i.e., job satisfaction). Using this macrostructure, along with an assumption of valence congruence (Connolly & Viswesvaran, 2000; Thoresen et al., 2003), researchers can propose that positive emotion experiences on the job influence positive evaluations of the job and negative emotion experiences on the job influence negative evaluations of the job.

From an appraisal theory perspective (Frijda et al., 1989; Lazarus, 1991; Lazarus & Folkman, 1984; Roseman, 2001, 2011, 2013; Shaver et al., 1987), the combination of emotions with the same primary appraisal (i.e., positive or negative) but differing secondary appraisals (e.g., the agency appraisal) precludes an understanding of how the secondary appraisals required for emotion elicitation factor into the relationships between emotions and job satisfaction. It is through a focus on specific emotion experiences and the unique appraisals therein that we understand the theoretical nuance of these relationships (i.e., the microstructures of the relationship between emotions and job satisfaction). However, it is unclear if and how the theoretical similarities and differences between specific versus general emotion experiences and job satisfaction manifest in the empirical relationships. Thus, we ask:

Research Question 1: How does the relationship between general (a) negative and (b) positive emotion experiences with job satisfaction differ empirically from specific emotion experiences with job satisfaction?

2.4 | Moderators of emotions and job satisfaction

Although our work focuses on specific and general experiences of emotion, there are key distinctions in emotion that are relevant to all emotion experiences: the frequency versus intensity of emotion and the target of emotion experience (Barsade et al., 2003; Barsade & Gibson, 2007; Brief & Weiss, 2002; Diener et al., 1985; Elfenbein, 2007; Fisher, 2000; Gooty et al., 2009). Further, numerous reviews and critiques have highlighted critical methodological issues that underscore the emotions and job satisfaction literature. These include problems with specific job satisfaction measures, level of analysis, and the time referent for recall of emotions and job satisfaction. (Fisher, 2000; Gooty et al., 2009; Judge et al., 2017, 2020; Judge & Klinger, 2008; Robinson & Clore, 2002a, 2002b). These substantive and methodological distinctions could impact effect sizes between emotions and job satisfaction and thus impact the inferences made in primary studies. As such, we examine the role of substantive and methodological moderators in an exploratory manner as detailed below.

2.4.1 | Substantive moderators

From a substantive perspective, emotional experiences can be distinguished in terms of frequency and intensity. Emotion frequency refers to how often the emotion experience occurs, whereas emotion intensity refers to how strongly one experiences an emotion. These two distinctions are often pitted against each other to determine which is more predictive for observed outcomes (Diener et al., 1985, 2009; Eckland et al., 2022; Fisher, 2000; Schimmack & Diener, 1997). For example, the frequency of positive emotion may be more strongly related to job satisfaction than intensity (Fisher, 2000), suggesting that feeling somewhat positive most of the time is a stronger contributor to job satisfaction than intense positive feelings only some of the time.

Emotional experiences can also be distinguished in terms of the target. The agency appraisal identifies the causal attributions (or lack thereof) required for specific discrete emotions to arise. However, the specific target of an emotional experience can vary. For example, anger is elicited when a specific entity causes an unfair event; however, this "specific entity" could be a team member, direct supervisor, or subordinate in a workplace context. The specific target of an emotion experience could contribute more or less to evaluations of overall job satisfaction. For example, perhaps emotional experiences targeted at a direct supervisor are more potent for job satisfaction due to the potential for supervisor power and influence to affect subordinate goal attainment in the workplace (Magee & Galinsky, 2008; Smith & Bargh, 2008). Further, some researchers operationalize emotion with broad referents, such as "at work" or "on the job," that are composed of mixed workplace targets. We examine these key distinctions in emotion experience as substantive moderators of the relationship between emotions and job satisfaction.

Research Question 2: To what extent do (a) emotion intensity versus frequency and (b) the target of an emotion experience moderate the emotion–job satisfaction associations?

2.4.2 | Methodological moderators

In regard to methodological issues in the job satisfaction literature, scholars agree that existing measures predominantly capture the cognitive component of job satisfaction (Fisher, 2000; Judge et al., 2017, 2020; Judge & Klinger, 2008). Indeed, there is still debate regarding the extent to which job satisfaction measures assess the affective component of the attitude (Judge et al., 2017, 2020; Judge & Klinger, 2008). Our meta-analysis contributes to this debate by using the accumulated empirical evidence base to examine whether certain job satisfaction measures are more strongly related to affect in the form of emotion.

Another critical methodological issue is the incorporation of time in relationships between emotions and job satisfaction. Emotions are, by definition, short-lived states that vary within people over time (Ashkanasy, 2003). Further, research using experience sampling methodology demonstrates that job satisfaction can also vary within a person over time (Judge et al., 2020; Judge & Klinger, 2008). This presents a two-fold issue for researchers. First, how does the level of analysis change the emotion–job satisfaction associations? Second, when emotion and job satisfaction are measured at the individual level, the time referent provided for recall (e.g., same day, over the past 2 weeks, and no time referent) becomes particularly important. Emotion research demonstrates that time referents over 2 weeks have the potential to introduce retrospective bias during recall (Beal et al., 2005; Robinson & Clore, 2002a, 2002b). Thus, the length of time from which individuals are asked to recall their emotions and job satisfaction may influence the nature of the emotion–job satisfaction relationships. Due to these measurement issues, we pose the following research question:

Research Question 3: To what extent do (a) certain job satisfaction measures, (b) level of analysis (intra-individual and individual), and (c) time referent in emotion and job satisfaction measurement moderate the emotion–job satisfaction associations?

3 | METHODS

The first step of our meta-analysis was an exhaustive review of the emotion and job satisfaction literature. This literature search resulted in the screening of 21 650 peer-reviewed journal articles, theses and dissertations, conference presentations, and unpublished studies. Our search terms, sources, and article counts for each part of the literature search are depicted in Table 1. To gain a better understanding of which emotions are most frequently studied in the organizational literature (e.g., the Shaver et al., 1987, emotion taxonomy identifies

135 different discrete emotions), we took a purposefully broad approach with our initial search of the literature through the year 2017 by using the search terms “emotion,” “positive affect,” and “negative affect” in abstracts, with a return of 18 668 papers. We used this initial literature pull to identify 16 discrete emotions examined with job satisfaction in at least three empirical studies. We then conducted a second literature search to specifically search for these 16 discrete emotions and to capture more recent work (no start date through December 2021). We used the 16 identified discrete emotion names and “job satisfaction” as search terms in abstracts (we also updated our abstract search using “emotion,” “positive affect,” “negative affect,” and “job satisfaction” with literature from 2018 to 2021).

Across these searches, we retained papers for the initial coding pool if they (a) included quantitative analyses involving emotion and/or affect and (b) utilized a sample of employed adults (we did not include student samples unless the students were explicitly reporting on emotion in their current job). Overall, our search resulted in a coding pool with 3592 papers. Before moving on to substantive coding, six of the authors engaged in reliability training by coding the same articles until acceptable inter-rater reliability was achieved (Cohen's kappa = .83 to 1.00: Cohen, 1960). After achieving inter-rater reliability, each of the authors independently coded from the pool of 3592 papers to determine the studies to be used for meta-analysis. We then double-coded all data used in the meta-analysis to ensure accuracy.

The following inclusion criteria were used for coding. First, we used the established definition of emotion (Fisher, 2000; Frijda, 1986; Lazarus, 1991; Weiss & Cropanzano, 1996) as a guide for measurement operationalization and included studies that measured an affective experience tied to an event or entity at work. In order to combat issues with definitional inconsistencies in the emotion literature (see Barsade et al., 2003; Barsade & Gibson, 2007; Elfenbein, 2007; Gooty et al., 2009 for reviews), we included studies where the authors termed the construct as “emotion,” “affect,” or “mood” if these constructs were operationalized in measurement with an event referent. We did not include studies where the authors labeled the construct “emotion,” but there was no event referent in the measurement. We did this because an event referent is critical to the distinction of emotion from mood (i.e., mood has no event referent: Briner & Kiefer, 2005; Fisher, 2000; Weiss & Cropanzano, 1996).

Second, we did not include emotion measurement that used an explicit time referent of “generally” as this aligns with the definition of trait affect and not emotion. For job satisfaction, an overwhelming majority of the emotion literature focused on overall job satisfaction such that there was not sufficient literature to meta-analyze job satisfaction at the facet level. After applying the above coding criteria, our data for meta-analysis included 235 independent samples and 382 effect sizes across 99 883 individuals and 22 600 intra-individual episodes. Due to space constraints, we provide the raw data and reference list for studies included in this meta-analysis in an [online supplement](#) (Data S4 and S5 respectively).

For our substantive moderators, we coded measures that asked participants how often they felt an emotion as “frequency” measures

TABLE 1 Summary of literature search.

Initial broad literature search with search terms:

- “Emotion,” or “positive affect,” or “negative affect” in abstract; “organization*” in full text

Sources	Date range	Number of papers returned
1. Peer-reviewed articles:	No start date–2017	18 668 published articles
a. PsycINFO and business source complete electronic databases		
b. Cross-check abstracts from 3 top journals—Academy of Management Journal, Journal of Management, Journal of Applied Psychology	2000–2017	Not applicable—all abstracts were reviewed
2. Conference papers:	AOM: 2000–2017; SIOP: 2003–2016	950 conference papers
a. Academy of Management		
b. Society for Industrial and Organizational Psychology		
3. Call for unpublished papers on OB, HR, and EMONET Academy of Management Listserv	Not applicable	4 unpublished studies

Secondary literature search with search terms:

- “Emotion,” or “positive affect,” or “negative affect”, and “job satisfaction” in abstract; “organization*” in full text
- Sixteen discrete emotion names and “job satisfaction” in abstract; “organization*” in full text

Sources	Date range	Number of papers returned
1. Peer-reviewed articles:	No start date–2021	854 published articles
a. PsycINFO and business source complete electronic databases ^a		
2. Proquest dissertations and theses global	No start date–2021	1174 dissertations and theses
	Total:	21 650 papers

Papers retained for coding pool and meta-analysis^b

Sources	Number of papers in coding pool	Number of papers with useable data for meta-analysis
1. Peer-reviewed articles from PsycINFO, business source complete, and cross-check of three top journals	2802	164
2. Dissertations and theses	497	48
3. AOM and SIOP conference papers	289	1
4. Unpublished papers	4	0
Total:	3592 papers	213 papers

^aTo update our initial search of PsycInfo and Business Source Complete, we only retrieved literature from 2018 to 2021 in the secondary search with the search terms “emotion,” or “positive affect,” or “negative affect,” and “job satisfaction” in abstract; “organization*” in full text.

^bThe inclusion criteria for the coding pool and the meta-analysis are described in the methods section.

and measures that asked participants how strongly they felt an emotion as “intensity” measures. Some emotion measures used mixed wording in this regard, and we coded these measures as “mixed” (c.f. Peters & O’Connor, 1980 frustration scale). For emotion target, we created categories based on the data (i.e., at least three studies for a given target): career, the job/work itself, others at work, supervisor, self-disclosure (e.g., disclosing one’s sexual orientation or chronic illness at work), significant event, organizational change, the organization, and mixed targets (i.e., “at work” or “on the job” targets). For our methodological moderators, our data represent a wide range of job satisfaction measures, with a critical mass of studies (at least three) to examine 11 job satisfaction measures. For level of analysis, we distinguished effect sizes at the intra-individual level from the individual level and coded their level of analysis accordingly. For the time referent moderation analyses, we coded and matched time referents for emotion and job satisfaction recall according to Robinson and Clore’s (2002a, 2002b) 2-week demarcation for retrospective bias in emotion recall: current/same day, within 2 weeks, longer than 2 weeks, and no time referent. We note, however, that there was an insufficient

number of studies (at least three) to meta-analyze matched emotion–job satisfaction data with a time referent of longer than 2 weeks. For a detailed list of our coding and analysis decisions, see the appendix in our [online supplement](#) (Data S1).

3.1 | Data analysis

We used psychometric meta-analysis (Schmidt & Hunter, 2015) for our primary and moderating analyses. The Schmidt and Hunter technique first corrects for random sampling error by calculating sample-size weighted correlations (reported in our results tables). The Schmidt and Hunter technique also corrects for measurement error to create mean true score correlations (i.e., both variables are corrected for unreliability). If reliability information was missing for a study, we imputed the average reliability from the studies in our meta-analytic work. We also report 95% confidence intervals, 80% credibility intervals, and the percentage of variance attributable to statistical artifacts for the mean true score correlations. If the confidence interval does

not include zero, then the mean true score correlation is considered significant. If the credibility interval includes zero, this suggests the potential of moderating variables.

To test our hypotheses, we grouped discrete emotion data by agency appraisal (circumstance-, self-, or other-) for analysis. For our moderation analyses, we divided all emotion data into positive and negative emotions (i.e., specific and general emotion experiences combined). Then, we created subgroups for each moderator category (e.g., three subgroups for RQ2a: emotion intensity, frequency, and mixed) to address Research Questions 2 and 3. Each subgroup needed at least three studies to perform a meta-analysis. To account for within-study dependencies (Cheung & Chan, 2004; Gooty et al., 2021), we created composite correlations if multiple effect sizes came from the same study. For interested readers, we also provide meta-analytic effect sizes by discrete emotion in our results tables and include moderation analyses by discrete emotion in our [online supplement](#) (Data S3). All analyses are at the individual level of analysis except for the intra-individual subgroup analysis (i.e., RQ3b) to avoid mixing data at different levels of analysis.

A battery of sensitivity analyses (e.g., one-sample removed analysis: Borenstein et al., 2009; trim and fill and cumulative meta-analysis: Duval & Tweedie, 2000a, 2000b; Kepes et al., 2012) were conducted on the primary distributions where $k \geq 20$ (due to the stability of these distributions) using Meta-Sen (Field et al., 2021). In total, 10 distributions were evaluated (see the [online supplement](#), Data S2 for the complete results). The analyses were largely robust to the influence of outliers. Six outliers were the most ever removed from any distribution (out of a total of 54 for the distribution based on anxiety–job satisfaction). In terms of evidence of potential publication bias, there was a range of results. The four positive emotion distributions showed little to no evidence of publication bias with tests such as the trim and fill analyses as well as a priori selection models showing little difference between the meta-analytic estimates and the adjusted estimates (this was consistent with and without identified outliers). While there was more evidence of potential publication bias in the distributions of negative emotions, generally speaking, all conclusions regarding the magnitude of the effect sizes were robust. For instance, in all trim and fill analyses, the typical change in adjusted effect size was less than approximately 0.07. The one exception was with the frustration–job satisfaction distribution where the effect size was adjusted from -0.39 to -0.28 for the fixed effects trim and fill. All publication bias tests have limitations, particularly due to the potential influence of moderating variables and sources of artifactual variance. However, there is greater confidence in the results when there is consistency across the tests, such as the case here.

4 | RESULTS

The meta-analytic results for negative emotions are depicted in Table 2 and positive emotions in Table 3. To infer support for our hypotheses and answer our research questions, we compare the

magnitude of the mean true score correlations. We use benchmarks from Bosco et al. (2015) that identify medium effect sizes with attitudinal variables as roughly between $|r| = .20$ and $.40$, with $|r| < .20$ interpreted as small effect sizes and $|r| > .40$ interpreted as large effect sizes. We also examine confidence intervals because overlapping confidence intervals indicate that the mean true score correlations are not significantly distinguishable from one another (Schmidt & Hunter, 2015).

Hypothesis 1 was supported for negative emotions (see Table 2): Our results show that circumstance-agency negative emotions had the largest meta-analytic effect size with job satisfaction ($\rho = -.46$, 95% CI $[-0.50, -0.43]$). Further, this meta-analytic effect size was significantly different from (i.e., the confidence intervals did not overlap) other- ($\rho = -.29$, 95% CI $[-0.38, -0.20]$) and self-agency ($\rho = -.26$, 95% CI $[-0.37, -0.15]$) negative emotions. In regard to Research Question 1a, only circumstance-agency negative emotions had a large relationship with job satisfaction. Self- and other-agency negative emotions, as well as general negative emotion experiences ($\rho = -.40$, 95% CI $[-0.45, -0.36]$), all demonstrated medium, negative relationships with job satisfaction. The large association between circumstance-agency negative emotions and job satisfaction may be due in part to the specific effects of anxiety ($\rho = -.41$), frustration ($\rho = -.44$), and depression ($\rho = -.60$).

Hypothesis 2 for positive emotions (see Table 3) was also supported: Our results show that circumstance-agency positive emotions had the largest meta-analytic effect size with job satisfaction ($\rho = .65$, 95% CI $[0.60, 0.71]$). Again, this meta-analytic effect size was significantly different from (i.e., the confidence intervals did not overlap) self-agency positive emotion ($\rho = .52$, 95% CI $[0.46, 0.59]$). Regarding Research Question 1b, all positive emotions regardless of the approach demonstrated large, positive relationships with job satisfaction. However, circumstance-agency positive emotions had a larger association with job satisfaction compared to general positive emotion experiences ($\rho = .55$, 95% CI $[0.51, 0.60]$), with the largest effect size noted for the specific emotion of happiness ($\rho = .69$).

We examined emotion intensity versus frequency and emotion target as substantive moderators of the emotion–job satisfaction associations. Regarding Research Question 2a, we found that negative emotion frequency ($\rho = -.54$, 95% CI $[-0.57, -0.50]$) had a stronger negative effect size with job satisfaction compared to negative emotion intensity ($\rho = -.34$, 95% CI $[-0.37, -0.30]$). Similarly, positive emotion frequency had a stronger positive effect size with job satisfaction ($\rho = .65$, 95% CI $[0.60, 0.70]$) compared to positive emotion intensity ($\rho = .53$, 95% CI $[0.49, 0.57]$). This result suggests that the frequency in which individuals experience emotions at work is more impactful for evaluations of job satisfaction than the intensity of any one emotion experience. Regarding Research Question 2b, although some overlap in confidence intervals emerged across targets, the general pattern of results suggests that emotions targeting one's organization (negative: $\rho = -.46$; positive: $\rho = .56$), supervisor (negative: $\rho = -.36$; positive: $\rho = .50$), or mixed workplace targets (negative: $\rho = -.50$; positive: $\rho = .65$) have the largest effect sizes with overall job satisfaction.

TABLE 2 Meta-analytic results for negative emotions and job satisfaction.

Variable	<i>k</i>	<i>N</i>	\bar{r}	<i>SD_r</i>	$\hat{\rho}$	<i>SD_p</i>	<i>CV_{LL}</i>	<i>CV_{UL}</i>	<i>CI_{LL}</i>	<i>CI_{UL}</i>	%Var
Hypothesis testing and Research Question 1											
General emotion experience	66	20 275	-.35	.18	-.40	.20	-.65	-.15	-.45	-.36	8%
Specific emotion experience											
Other-agency emotions	24	5302	-.26	.20	-.29	.22	-.56	-.01	-.38	-.20	10%
Anger	16	3833	-.32	.13	-.37	.13	-.53	-.20	-.44	-.30	21%
Hostility	8	1303	-.17	.19	-.19	.20	-.45	.07	-.34	-.04	15%
Envy	3	802	.00	.18	.00	.18	-.23	.22	-.21	.21	12%
Self-agency emotion (guilt)	8	1886	-.22	.15	-.26	.15	-.44	-.07	-.37	-.15	19%
Circumstance- agency emotions	97	53 011	-.39	.15	-.46	.17	-.68	-.24	-.50	-.43	6%
Depression	15	26 025	-.53	.05	-.60	.05	-.67	-.53	-.63	-.57	13%
Sadness	4	1204	-.18	.10	-.20	.09	-.31	-.09	-.30	-.10	34%
Fear	14	7254	-.27	.08	-.32	.08	-.42	-.22	-.37	-.28	28%
Anxiety	54	38 781	-.35	.11	-.41	.12	-.56	-.26	-.44	-.38	9%
Irritation	7	1977	-.34	.09	-.38	.08	-.48	-.28	-.45	-.31	37%
Frustration	24	5395	-.37	.22	-.44	.25	-.76	-.12	-.54	-.34	7%
Substantive and methodological moderators											
Negative emotions ^a	177	75 970	-.38	.17	-.44	.19	-.68	-.20	-.47	-.41	6%
Intensity vs. frequency											
Intensity	102	32 698	-.29	.16	-.34	.17	-.55	-.12	-.37	-.30	11%
Frequency	59	39 424	-.46	.12	-.54	.14	-.71	-.36	-.57	-.50	7%
Mixed	16	3615	-.30	.23	-.36	.28	-.71	-.01	-.50	-.22	7%
Target											
The job/work	6	1277	-.25	.23	-.29	.26	-.62	.04	-.50	-.08	8%
Others at work	10	5400	-.21	.13	-.25	.15	-.44	-.06	-.34	-.15	10%
Supervisor	10	2819	-.33	.20	-.36	.22	-.64	-.08	-.50	-.22	7%
Self-disclosure	4	1056	-.31	.10	-.36	.08	-.47	-.26	-.46	-.26	38%
Significant event	9	5097	-.18	.12	-.21	.14	-.39	-.03	-.31	-.12	11%
Organizational change	4	2482	-.16	.11	-.19	.13	-.36	-.02	-.33	-.05	11%
Organization	4	794	-.39	.11	-.46	.07	-.55	-.36	-.55	-.36	48%
Mixed	125	56 267	-.43	.14	-.50	.16	-.70	-.30	-.52	-.47	8%
Job satisfaction measure											
OJS	33	9959	-.30	.17	-.35	.19	-.60	-.11	-.42	-.29	9%
JDI	6	818	-.58	.14	-.65	.12	-.80	-.49	-.75	-.54	22%
JDS	7	1542	-.33	.13	-.44	.11	-.59	-.29	-.53	-.34	32%
MOAQ-JSS	46	11 103	-.35	.21	-.41	.23	-.70	-.11	-.48	-.34	7%
MSQ	5	3800	-.48	.12	-.53	.13	-.70	-.36	-.65	-.41	5%
QOE survey	6	1520	-.28	.20	-.34	.23	-.64	-.04	-.53	-.14	8%
JSS	3	997	-.29	.03	-.32	.00	-.32	-.32	-.38	-.26	99%
JIG	4	977	-.39	.04	-.44	.00	-.44	-.44	-.49	-.39	99%
The faces scale	6	1324	-.41	.14	-.45	.16	-.65	-.24	-.58	-.31	13%
JSB	3	1592	-.27	.07	-.34	.05	-.41	-.28	-.42	-.27	50%
WJSS	6	2469	-.29	.21	-.37	.25	-.69	-.05	-.57	-.16	5%
Level of analysis											
Intra-individual	17	17 489	-.35	.10	-.42	.13	-.59	-.25	-.48	-.35	6%
Matched time referent											
Same day	19	2175	-.33	.20	-.37	.20	-.63	-.12	-.47	-.28	18%

(Continues)

TABLE 2 (Continued)

Variable	<i>k</i>	<i>N</i>	\bar{r}	SD_r	$\hat{\rho}$	SD_ρ	CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	%Var
Within 2 weeks	4	795	-.36	.11	-.41	.09	-.53	-.30	-.52	-.31	36%
None	101	32 124	-.30	.18	-.35	.20	-.60	-.10	-.39	-.31	8%

Note: *k* = number of independent samples; *N* = total sample size; \bar{r} = sample size–weighted mean observed correlation; SD_r = sample size–weighted observed standard deviation of correlations; ρ = mean true score correlation (corrected for unreliability for both variables); CI_{LL} and CI_{UL} = lower and upper bounds, respectively, of the 95% confidence interval around the mean true score correlation; CV_{LL} and CV_{UL} = lower and upper bounds, respectively, of the 80% credibility interval; SD_ρ , standard deviation of corrected correlations; %Var = percentage of variance attributable to statistical artifacts.

Abbreviations: JDI, Job Descriptive Index (Smith et al., 1969); JDS, Job Diagnostic Survey (Hackman & Oldham, 1975); JIG, Job in General Scale (Ironson et al., 1989); JSB, Job Satisfaction Blank (Hoppock, 1935); JSS, Job Satisfaction Survey (Spector, 1985); MOAQ-JSS, Michigan Organizational Assessment Questionnaire (Cammann et al., 1979, 1983); MSQ, Minnesota Satisfaction Questionnaire (Weiss et al., 1967); OJS = Overall Job Satisfaction Scale (Brayfield & Rothe, 1951); QOE Survey, Quality of Employment Survey (Quinn & Staines, 1979); The Faces Scale (Kunin, 1955); WJSS, Job Satisfaction Scale (Warr et al., 1979).

^aThese are the meta-analytic results for all individual-level negative emotions combined (i.e., specific and general emotion experiences combined).

We examined job satisfaction measure, level of analysis, and time referent as methodological moderators. Regarding Research Question 3a, we found that some job satisfaction measures demonstrated stronger effect sizes with emotions than others. For example, the Job Descriptive Index (JDI; Smith et al., 1969) demonstrated stronger effect sizes across both negative ($\rho = -.65$) and positive emotions ($\rho = .63$), whereas the QOE Survey (Quality of Employment Survey; Quinn & Staines, 1979) demonstrated consistently smaller effect sizes across negative ($\rho = -.34$) and positive emotions ($\rho = .42$). Regarding Research Question 3b, we found the relationships between emotions and job satisfaction were largely equivalent at the individual (negative: $\rho = -.44$; positive: $\rho = .56$) and intra-individual (negative: $\rho = -.42$; positive: $\rho = .50$) levels of analyses. Similarly, for Research Question 3c, the use of a same day, within 2 weeks, or no time referent for participant recall of emotion and job satisfaction produced similar effect sizes for positive emotions ($\rho = .54$ to $.58$) and negative emotions ($\rho = -.35$ to $-.41$).

5 | DISCUSSION

Our meta-analysis provides four main contributions to the literature. First, we refine the theorizing of a core relationship in the AET macrostructure (Weiss & Cropanzano, 1996)—emotions and job satisfaction—by building the microstructures to explain why distinct discrete emotions differentially relate to job satisfaction via appraisal theory of emotion. Second, we meta-analytically test this microstructure to provide empirical support for our theoretical refinement. Third, we provide meta-analytic evidence to demonstrate how different conceptualizations of emotion (specific and general emotion experiences) shape emotion and job satisfaction in empirical literature. Finally, we offer meta-analytic findings for five substantive and methodological moderators of the emotion–job satisfaction associations that both support and contradict influential critiques and reviews of the emotions and job satisfaction domains. In the following section, we discuss each of these contributions and detail how our work provides a foundation for future research.

5.1 | Refining the AET macrostructure

Although AET (Weiss & Cropanzano, 1996) is cited frequently when studying emotions and job satisfaction, the primary theoretical tenet that scholars have invoked is that “affective experiences on the job influence evaluations of the job.” When it comes to supporting AET, researchers could essentially find any relationship at all between emotions and job satisfaction (or other correlates), and the theory would be confirmed. This theoretical generality is due, in part, because AET was intended to provide a general framework without the theoretical specificity for many testable hypotheses (Weiss & Beal, 2005).

To provide much-needed theoretical specificity to the macrostructure of AET (Weiss & Cropanzano, 1996), we refined a core relationship in this general framework by drawing on appraisal theory to develop specific predictions regarding the relationship between 16 discrete emotions and job satisfaction (see Figure 1). Our meta-analytic results supported our theoretical propositions. Broadly speaking, negative emotions are negatively related to job satisfaction, and positive emotions are positively related to job satisfaction. Importantly, the *strength* of these relationships depends on the agency appraisal of each emotion: circumstance-agency emotions have the strongest relationships (both positive and negative) with job satisfaction. Thus, our results suggest that the most impactful discrete emotions for overall job satisfaction arise when employees appraise situations in the work environment as the cause of goal disruption and attainment. We now have greater insights into understanding *why* some discrete emotions are more strongly related to job satisfaction than others, which is a level of specificity not addressed in AET (Weiss & Cropanzano, 1996). Through this meta-analytic work, we provide a foundation for researchers to develop more nuanced hypotheses regarding emotions which, in turn, allows for more targeted and specific research questions to be developed. Our theoretical refinement of the emotion–job satisfaction relationship in AET also provides an example for scholars of how theoretical microstructures could be developed for other relationships within AET in regard to emotions (i.e., the relationships between workplace events and emotions and also the relationships between emotions and work behaviors).

TABLE 3 Meta-analytic results for positive emotions and job satisfaction.

Variable	<i>k</i>	<i>N</i>	\bar{r}	<i>SD_r</i>	$\hat{\rho}$	<i>SD_ρ</i>	<i>CV_{LL}</i>	<i>CV_{UL}</i>	<i>CI_{LL}</i>	<i>CI_{UL}</i>	%Var
Hypothesis testing and Research Question 1											
General emotion experience	64	21 726	.48	.18	.55	.19	.31	.80	.51	.60	6%
Specific emotion experience											
Self-agency emotion (pride)	25	13 456	.49	.16	.52	.17	.31	.74	.46	.59	4%
Circumstance- agency emotions	25	7825	.55	.11	.65	.13	.48	.83	.60	.71	11%
Joy	5	836	.47	.10	.51	.06	.43	.59	.43	.59	52%
Contentment	3	566	.47	.04	.50	.00	.50	.50	.44	.56	99%
Happiness	4	1933	.60	.03	.69	.02	.66	.72	.65	.72	71%
Hope	13	5441	.49	.13	.57	.14	.39	.75	.49	.65	8%
Optimism	13	5066	.47	.15	.57	.19	.33	.81	.47	.68	6%
Substantive and methodological moderators											
Positive emotions ^a	109	41 838	.50	.17	.56	.18	.33	.79	.52	.60	5%
Intensity vs. frequency											
Intensity	73	29 793	.48	.16	.53	.17	.32	.75	.49	.57	6%
Frequency	29	9063	.57	.14	.65	.14	.47	.82	.60	.70	9%
Mixed	11	4594	.54	.12	.63	.15	.43	.82	.53	.72	7%
Target											
Career	3	458	.43	.08	.48	.00	.48	.48	.40	.55	99%
The job/work	6	2497	.36	.18	.37	.20	.12	.62	.21	.53	5%
Others at work	3	788	.23	.06	.28	.02	.25	.30	.21	.35	95%
Supervisor	5	1856	.46	.22	.50	.24	.19	.80	.28	.71	3%
Significant event	7	4192	.29	.16	.35	.19	.11	.59	.21	.49	6%
Organization	16	10 401	.52	.14	.56	.14	.38	.73	.49	.63	5%
Mixed	66	21 083	.56	.11	.65	.12	.49	.81	.62	.68	11%
Job satisfaction measure											
OJS	25	5872	.47	.23	.54	.26	.20	.87	.43	.64	5%
JDI	3	1345	.55	.06	.63	.07	.53	.72	.54	.72	21%
JDS	4	1380	.56	.04	.73	.03	.69	.76	.68	.77	76%
MOAQ-JSS	18	5139	.58	.11	.66	.11	.53	.80	.61	.72	15%
MSQ	10	5969	.57	.10	.65	.09	.53	.77	.59	.71	10%
QOE survey	4	1035	.36	.15	.42	.14	.24	.60	.27	.57	16%
JSS	4	1298	.57	.07	.62	.04	.56	.68	.56	.68	46%
Level of analysis											
Intra-individual	15	16 372	.43	.20	.50	.23	.20	.80	.38	.62	1%
Matched time referent											
Same day	16	1964	.49	.10	.54	.08	.43	.64	.49	.59	47%
Within 2 weeks	3	740	.51	.11	.58	.10	.45	.71	.46	.71	22%
None	53	22 542	.49	.16	.54	.16	.33	.75	.49	.58	6%

Note: *k* = number of independent samples; *N* = total sample size; \bar{r} = sample size-weighted mean observed correlation; *SD_r* = sample size-weighted observed standard deviation of correlations; $\hat{\rho}$ = mean true score correlation (corrected for unreliability for both variables); *SD_ρ* = standard deviation of corrected correlations; *CV_{LL}* and *CV_{UL}* = lower and upper bounds, respectively, of the 80% credibility interval; *CI_{LL}* and *CI_{UL}* = lower and upper bounds, respectively, of the 95% confidence interval around the mean true score correlation; %Var = percentage of variance attributable to statistical artifacts. Abbreviations: JDI = Job Descriptive Index (Smith et al., 1969); JDS = Job Diagnostic Survey (Hackman & Oldham, 1975); JSS = Job Satisfaction Survey (Spector, 1985); MOAQ-JSS = Michigan Organizational Assessment Questionnaire (Cammann et al., 1979, 1983); MSQ = Minnesota Satisfaction Questionnaire (Weiss et al., 1967); OJS = Overall Job Satisfaction Scale (Brayfield & Rothe, 1951); QOE Survey = Quality of Employment Survey (Quinn & Staines, 1979).

^aThese are the meta-analytic results for all individual-level positive emotions combined (i.e., specific and general emotion experiences combined).

5.2 | Testing the emotion–job satisfaction microstructure

Our meta-analytic examination provides empirical support for a key relationship in a widely used theoretical framework in organizational affective research, AET (Weiss & Cropanzano, 1996). Our results provide support for AET but also highlight differences from prior meta-analyses of job satisfaction and other affective constructs. As a point of comparison, we contrast our results on positive and negative emotions to the most recent meta-analysis with job satisfaction and positive and negative state affect (Thoresen et al., 2003: positive state affect $k = 10$, $\rho = .44$; negative state affect $k = 40$, $\rho = -.36$). Our results suggest that positive emotions (i.e., independent of mood) have a stronger relationship with job satisfaction at $\rho = .50$ to $.69$ than positive state affect. Thus, positive emotions tied to specific events, people, and entities may be more impactful on job satisfaction judgments compared to more generalized states of positive affect. However, our results for negative emotions (independent of mood) are much more nuanced due to the broad range of effect sizes with job satisfaction at $\rho = -.60$ to $.00$. This result opens avenues for future research regarding how and why different negative emotions lead to different outcomes, and which negative emotions organizations should invest in mitigating or preventing in order to create more positive employee and workplace outcomes.

5.3 | Different conceptualizations of emotion

We tested two different conceptualizations of emotion experience in our meta-analytic work to reflect the current state of the literature: specific emotion experiences and general emotion experiences. Although circumstance-agency positive emotions had the largest effect sizes with job satisfaction, all positive emotions had large associations with job satisfaction across both the specific and general approaches. Thus, there is evidence for empirical similarity across the general versus specific approaches to studying positive emotions despite their theoretical differences. This finding also highlights the importance of the primary appraisal (i.e., goal attainment) for positive emotions and their relationships with job satisfaction and suggests that aggregating positive emotions by valence may not be a critical issue for critique in future research on emotions and job satisfaction.

In contrast, our results show that negative emotions have a wider range of associations with job satisfaction. For example, negative emotion effect sizes ranged from nonsignificant findings for envy ($\rho = .00$) to very large for depression ($\rho = -.60$). Work-related depression emerged as a standalone phenomenon with job satisfaction, as depression had a larger effect size with job satisfaction than circumstance-agency negative emotions as a group *and* the confidence intervals did not overlap (this was not the case for the positive emotion of happiness—it was equivalent to the effect size for circumstance-agency positive emotions). This unique result may be due to the complexity and intensity of depression. We included depression as a discrete emotion per the Shaver et al. (1987) discrete

emotion taxonomy, but some emotion scholars have categorized it as a “complex state” (Lazarus, 1991). Depression captures one’s feelings of loss or deprivation, and a distinct appraisal of depression is that one generalizes loss to their whole life (versus isolating it to the event at hand like with sadness: Lazarus, 1991). This is a potential explanation for its large effect size on job satisfaction.

Given the varying effect sizes we found for different negative emotions, combining these emotions as “general negative emotion” may wash away meaningful variability among negative emotions and their impact on judgments such as job satisfaction. Therefore, and in line with previous conceptual critiques (Barsade & Gibson, 2007; Briner & Kiefer, 2005; Gooty et al., 2009), we argue that aggregating negative emotions by valence oversimplifies the nuanced relationships between negative discrete emotions and job satisfaction. We recommend that researchers be mindful of general negative emotion experiences and urge caution in aggregating specific negative discrete emotions together without providing clear theoretical justification for this decision.

5.4 | Moderators of the emotion–job satisfaction relationships

Given the inconsistent findings regarding the relationship between emotions and job satisfaction, we meta-analytically tested five substantive and methodological moderators. In doing so, we addressed prior critiques (Diener et al., 1985, 2009; Eckland et al., 2022; Fisher, 2000; Gooty et al., 2009; Judge & Klinger, 2008; Judge et al., 2017, 2020; Robinson & Clore, 2002a, 2002b; Schimmack & Diener, 1997) and also examined key distinctions that may be overlooked or downplayed in the emotions literature. For example, we provide meta-analytic evidence that emotion frequency is more strongly related to job satisfaction than emotion intensity. This result highlights the need for future theoretical works to clarify *why* and *how* the frequency of certain emotions at work may be more predictive of job evaluations than the intensity of certain emotions. These boundary conditions are not something that can be explained by the macrostructure of AET (Weiss & Cropanzano, 1996) beyond the notion that emotions are “dynamic.” Further yet, evidence is beginning to emerge in other fields suggesting distinct discrete emotions may differ in whether frequency or intensity is more important for focal outcomes (e.g., psychopathology: Eckland et al., 2022). We provided intensity versus frequency moderation analyses by discrete emotion in our [online supplement](#) (Data S3), but we urge caution in interpreting these findings as many distributions are based on as few as three studies. One takeaway from our work in this regard is that despite the importance of emotion frequency for job satisfaction, emotion intensity is more commonly studied among specific discrete emotions. We encourage scholars to carefully examine their use of frequency versus intensity in emotion measurement and to provide justification as to why their chosen approach is appropriate.

In regard to the target of employees’ emotions at work, it may be tempting for emotions scholars to paint with a broad brush (e.g., the

“macrostructures” of AET: Weiss & Cropanzano, 1996) to explain how employee emotions at work relate to other constructs. However, simply drawing from the macrostructure of AET does not allow emotion researchers to theoretically account for the variability in emotion–outcome relationships across specific targets of emotion at work (e.g., people, events, and entities). Our results suggest there is, indeed, variability in the strength of emotion–job satisfaction relationships across various targets of emotion. Given these results, it is clear that theoretical consideration of an emotion's target is necessary when predicting relationships with other constructs. As an example, our meta-analytic results highlight the relative strength of employee emotions targeting their supervisor and organization for evaluations of job satisfaction. Supervisors and the organization as a whole may be particularly important targets given the power organizations and supervisors (as agents of the organization) have to influence employee goal attainment (Magee & Galinsky, 2008; Smith & Bargh, 2008). However, further theorizing is needed to explain how the targets of various emotions (and not simply the emotions themselves) influence relationships between emotions and correlates and outcomes at work, including job satisfaction.

In terms of methodological moderators, our results underscore the need for precision in research design and also highlight issues in need of attention in the literature. First, we add to the continued discussion regarding the extent to which job satisfaction measures are more closely related to cognition versus affect (Judge et al., 2017, 2020; Judge & Klinger, 2008). Prior research demonstrates that affective experiences at work may be more strongly related to nonverbal affective measures of job satisfaction, such as the Faces Scale (Kunin, 1955), when compared to cognitive measures of satisfaction (Brief & Roberson, 1989; Fisher, 2000). However, our results suggest there is also variability *within* the cognitive measures of job satisfaction when it comes to their relations to employees' emotions. This level of nuance illustrates that not all job satisfaction measures are equivalent, even within the same “family” of measures, and scholars should consider and justify their choice of measure when studying emotion and job satisfaction.

Second, our focus on level of analysis and time referents in emotion and job satisfaction measurement contributes to the ongoing scholarly conversation on the importance of time in organizational theory in general (Mitchell & James, 2001; Morgeson et al., 2015; Roe, 2008), and for emotion and job satisfaction research specifically (Gooty et al., 2009; Judge et al., 2020; Judge & Klinger, 2008; Robinson & Clore, 2002a, 2002b). We provide the first meta-analytic test of these critiques to see if time (via time referent and level of analysis) actually influences empirical findings in the emotions and job satisfaction domain. Our results suggest that it largely does not; however, these results may be attributable to multiple factors. For level of analysis, the vast majority of the emotion and job satisfaction literature is at the individual level of analysis; thus, more research is needed at the intra-individual level of analysis for robust conclusions to be drawn. For time referent, the similarities in effect sizes may be attributable to the categories represented in the emotion–job satisfaction data with matched time referents: same

day, within 2 weeks, and no time referent (note that there was an insufficient number of studies to examine the “over 2 weeks” time referent). Both the “same day” and “within 2 weeks” time referents fall within the generally accepted time boundary for episodic emotion recall (Robinson & Clore, 2002a, 2002b). While we did not include emotion measurement using a “general” time referent, we did include emotion measures with no time referent. It is possible that employees drew from current/most recent emotion experiences at work with the lack of a guiding time referent, which would include episodic knowledge (although not experiential information; Robinson & Clore, 2002a, 2002b). This, however, is an empirical question, and we encourage scholars to continue with precision in their research design (i.e., measuring emotions as short-lived experiences) as it is theoretically appropriate (Ashkanasy, 2003).

5.5 | Practical implications

Decades of scholarship on job satisfaction highlight many important factors for organizations to consider, including employee values, job features and characteristics, social interactions, and employee dispositions to name a few (Judge et al., 2017). Based on our results, we suggest that organizational leaders interested in promoting job satisfaction should also attend to the emotional experiences of their employees. To understand employees' emotions, organizations can proactively take the emotional “pulse” of their employees (Maurer, 2019). Organizational leaders can be trained to recognize and seek out opportunities to discuss emotions with employees, especially circumstance-agency emotions that stem from broader situational conditions in the workplace. For example, leaders can preemptively identify that employees may experience depression in response to an impending event that creates an irrevocable loss. Such events should be handled with care and emotional “check-ins” may be required to help employees process and manage their emotions. These emotional “check-ins” should happen regularly to capture the short-lived and episodic nature of emotions (Ashkanasy, 2003; Robinson & Clore, 2002a, 2002b) and, based on our results, they should focus on the frequency and target of the emotions as well. Although these types of conversations highlight to employees the importance of their emotions to their organization, leaders should be mindful of the hierarchical status differential between the two parties, which could result in subordinates faking, suppressing, or concealing their emotions (Ridgeway & Johnson, 1990; Thomas et al., 2018).

To address some of the potential issues with manager-led conversations around emotions, organizations can also design feedback mechanisms to better understand employee emotions, such as surveys and sentiment analysis of open-ended feedback using machine learning (Maurer, 2019). Surveys and prompts should be designed in a way to recall specific emotions and in reference to specific events, people, or entities. For example, employees may experience heightened anxiety, frustration, and even hope due to a proposed organizational change. This information can be used to guide decision-making and planning in an effort to regulate anxiety and frustration while

amplifying employee hope to ultimately maintain or improve employees' job satisfaction throughout the organizational change.

Our results also suggest that organizations should pay attention to the frequency of emotion experiences, even if these experiences are of low intensity. For negative emotions, leaders should be aware that intense negative emotion experiences, although harmful, may be less impactful in the long run. However, long-term, mild negative emotions build over time and are more impactful for job satisfaction. Thus, particular attention should be paid to affective events or episodes that are likely to create long-term negative consequences for employees. For positive emotions, leaders should acknowledge the small wins in everyday organizational life and encourage the frequent experience of positive emotions more so than focusing on occasional, intense positive experiences at work.

A greater understanding of employees' emotion experiences may be useful for organizational job satisfaction initiatives, but with great emotion knowledge also comes great responsibility. Organizations can offer training and development programs to help employees better identify and understand emotions (both their own and others' emotions) and provide them with strategies for effective emotion regulation as prior research has highlighted the important role of emotion regulation in job satisfaction (Madrid et al., 2020). Techniques such as cognitive reappraisal, attentional deployment, and controlling cognitive rumination could not only provide employees with necessary tools for managing their emotions but could also impact their job satisfaction (Barrett & Gross, 2001; Gross, 2014; Madrid et al., 2020).

5.6 | Limitations and future research

Our study has some limitations that offer opportunities for future research. First, due to the use of meta-analysis, our data represent available primary studies in the organizational literature and their accompanying limitations. Second, we were limited to a focus on overall job satisfaction in contrast to a focus on both overall and facet-level job satisfaction as there was insufficient literature to meta-analyze the associations between emotions and specific facets of job satisfaction. Future research is needed to extend our work to facet-level job satisfaction. We suspect that discrete emotions composed of other-agency appraisals (e.g., anger, envy, and hostility) may become more impactful for specific facets of job satisfaction, such as satisfaction with one's supervisor or coworkers.

Third, we do not use a research design that allows for causal inferences of the relationship between emotions and job satisfaction. As previously mentioned, AET (Weiss & Cropanzano, 1996) suggests that events occur in the workplace that trigger emotional reactions, and in turn, these reactions influence job satisfaction. However, it may also be the case that overall job satisfaction contributes to the assessment of workplace events and directly influences or moderates emotional experiences in the workplace (either positive or negative emotions). Similar to the relation between job satisfaction and job performance (for a review of various conceptual

models, see Judge et al., 2001), it may be the case that certain discrete emotions cause job satisfaction, and on other occasions, job satisfaction causes certain discrete emotions. Notably, this relationship may operate in multiple ways and there is a need to better understand this phenomenon conceptually. Unfortunately, there are a number of methodological limitations in the empirical literature on emotions and job satisfaction studies that preclude an understanding of the conceptual nature of the causal relationship between these constructs, and future research needs to take clearer steps to facilitate causal claims. Experimental designs are the gold standard for accomplishing this. However, such designs are not always feasible in field research nor are they always desirable when studying emotions in the workplace. We encourage researchers to examine techniques that include quasi-experimental designs (Podsakoff & Podsakoff, 2019) and the use of two-stage least squares regression (2SLS), which draws upon instrumental variables (Antonakis et al., 2010; Hill et al., 2021). Instrumental variables, such as stable individual differences (e.g., emotional stability), are exogenous and can be used to eliminate bias from estimated coefficients. Thus, although we were unable to test causality between emotions and job satisfaction, we provide recommendations here to ensure that future primary studies (and subsequently, meta-analyses) can advance theory using correctly specified causal models.

Fourth, the focal emotions in our work are limited to the extant empirical research in the job satisfaction literature. For specific emotion experiences, we only used discrete emotions from Shaver et al.'s (1987) emotion taxonomy with at least three quantitative studies in the job satisfaction literature to address our hypotheses and research questions. Future research should build on the theoretical foundations we advance in this paper with AET (Weiss & Cropanzano, 1996) and appraisal theory of emotion (Frijda et al., 1989; Lazarus, 1991; Lazarus & Folkman, 1984; Roseman, 2001, 2011, 2013; Shaver et al., 1987) to incorporate more discrete emotions. For example, we were limited in our ability to test positive emotions with differing agency appraisals as the majority of our focal emotions had a circumstance-agency appraisal. This may contribute to the diminished range in effect sizes for positive emotions in our data. For example, multiple positive emotions with other-agency appraisals in the workplace emotion literature, including gratitude, affection, and love (e.g., Barsade & O'Neill, 2014; Fehr et al., 2017; Levine et al., 2011), need more representation in the empirical job satisfaction literature. Further, our meta-analytic effect sizes based on as few as three primary studies ($k = 3$) should be replicated in future research to examine the stability of these associations.

Further, we made several choices in our conceptualization of emotion experience that influenced the implications of our results. For example, we divided our theorizing and analyses of emotion experience by valence. While this is representative of the emotion and job satisfaction literature, it may not be representative of people's lived experiences. The everyday lives of individuals are characterized by emotional reactions that can include the simultaneous experience of both positive and negative emotions with diverse appraisals (Scherer & Tannenbaum, 1986). For example, a job promotion may

elicit happiness that you are being promoted (positive, circumstance-agency), pride in your own hard work (positive, self-agency), as well as anxiety due to future, uncertain changes in the work environment (negative, circumstance-agency). The combination of positive and negative emotions may have differing effects on job satisfaction compared to the examination of emotions by valence. Although studies using general emotion experiences examine multiple emotions with job satisfaction, they typically do not focus on mixed valence emotions, nor do they provide a conceptual explanation for how various emotions (with their unique appraisal dimensions) come together to influence job satisfaction. Thus, more conceptual and empirical work is needed on the simultaneous experience of mixed valence emotions and job satisfaction.

We also chose to focus on integral emotion (versus incidental emotion) as our inclusion criteria required a work-related target for all emotion data. When examining emotion in relation to judgments, integral emotions are emotions targeted at the object of judgment, whereas incidental emotions are targeted at something unrelated to the object of judgment (Pham, 2007). Thus, our work does not examine incidental emotion as we only include emotional reactions to aspects of one's job or work, and this target is the same in judgments of job satisfaction. Future research should extend our findings to incidental emotions and job satisfaction to see if our findings hold when considering this alternative conceptualization of emotion.

Beyond the future research that stems from the limitations and distinctions described above, our work demonstrates the importance of viewing AET (Weiss & Cropanzano, 1996) as a macrostructure to guide research on emotions in the workplace rather than a testable theory (Weiss & Beal, 2005). We provide a start to the theoretical work needed to build the microstructures of the comprehensive AET framework. Emotions are complex phenomena, and specific emotions can be distinguished by different components, including appraisals, action tendencies, and activation levels (per appraisal theory of emotion: Frijda et al., 1989; Lazarus, 1991; Roseman, 2001, 2011, 2013; Shaver et al., 1987). Although we theorize and empirically demonstrate that agency appraisal is a parsimonious explanation for the linkage between emotion and overall job satisfaction, these components of appraisal theory offer fertile ground for further building the microstructures between emotions and correlates/outcomes. In line with the original intentions of AET (Weiss & Beal, 2005), emotion researchers can extend our work and continue building out the microstructures of this general framework.

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CONFLICT OF INTEREST STATEMENT

We have no conflicts of interest to disclose.

DATA AVAILABILITY STATEMENT

Coded data available via an online supplement (Data S4): https://osf.io/43yz5/?view_only=3cbc83963e724607a1b197d2a198ebaf.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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