

## A Prototype Analysis of Lay Conceptions of Workplace Criers

Terri Tan Su-May<sup>1</sup> and Kenichi Ito<sup>2</sup>

<sup>1</sup> School of Business, Republic Polytechnic, Singapore, Singapore

<sup>2</sup> Psychology Department, University of Lethbridge, Lethbridge, Canada

---

### Abstract

Crying is an intense emotional expression that can shape important workplace outcomes such as coworker relationships and performance evaluations. However, research on perceptions of employees who cry at work has focused on a limited set of features (e.g., competence), resulting in other potentially relevant ones (e.g., being sensitive) being understudied. Existing literature also suggests that some features may be attributed to criers more quickly than others, although this has not been directly examined. To address these gaps, we conducted three studies with full-time employees to investigate whether perceptions of workplace criers are prototypically organized with a broad range of features that vary in representativeness. In Study 1 ( $n = 163$ ), participants listed their perceptions of workplace criers, generating 51 overarching features that varied in frequency of mention. These features included commonly studied traits (e.g., competence, warmth) and less studied ones (e.g., being stressed). In Study 2 ( $n = 97$ ), a separate sample rated how strongly the features from Study 1 represented workplace criers. Results unravelled clear differences in prototypicality: features such as “Stressed” and “Sensitive” were rated as highly representative, while others such as “Incompetent” and “Unmotivated” were less representative. Prototypicality ratings were also positively associated with the feature frequencies obtained in Study 1. Lastly, participants in Study 3 ( $n = 162$ ) completed a reaction time task and were faster to confirm central features and reject peripheral ones. Together, these findings demonstrate that perceptions of workplace criers are extensive and prototypically structured, offering insights into how crying shapes interpersonal perceptions at work.


*Keywords:* prototype analysis, crying, emotional expressions, employees, perception

---

### Introduction

The topic of crying has garnered recent scholarly attention, with the workplace being the primary context for research on the interpersonal effects of crying (MacArthur & Shields, 2019). This is because work represents a central life domain

---

Terri Tan Su-May  <https://orcid.org/0000-0002-4817-0012>

Kenichi Ito  <https://orcid.org/0000-0001-6936-4468>

This project was undertaken without funding.

✉ Kenichi Ito, Psychology Department, University of Lethbridge. 4401 University Dr W, Lethbridge, AB T1K 3M4, Canada. Email: [kenichi.ito@uleth.ca](mailto:kenichi.ito@uleth.ca)

(Giattino et al., 2013), with employees spending a substantial amount of time with co-workers. Apart from being extreme and attention-grabbing (Becker et al., 2018; Fischer et al., 2013), crying is also posited to be “the most intense human emotion expression that occurs in the workplace” (Becker et al., 2018, p. 26).

While some scholars regard workplace crying as unusual (Elsbach & Bechky, 2018), others believe it occurs frequently (Bouskila-Yam & Kluger, 2011). For example, in a recent career poll by the global job search portal *Monster.com*, 80% of 3,078 employee respondents reported having cried at work, and an additional 13.5% reported crying every week (Bolden-Barrett, 2019; Picchi, 2019). Such findings attest to workplace crying as a common occurrence rather than an exception. Due to its conspicuousness and extreme nature, organizational norms often dictate that employees maintain professionalism by exercising emotional control and refraining from spontaneous outbursts. Consequently, employees who cry are viewed as violating or disrespecting these norms (Fischer et al., 2013; Grandey, 2000).

### **Features of Workplace Criers Assessed in Literature**

To investigate the interpersonal effects of workplace crying, previous studies have typically presented a work context in which crying occurs and instructed observers to evaluate criers on features such as warmth, competence, and emotionality (Fischer et al., 2013; van de Ven et al., 2017; Wolf et al., 2016). Ratings of such features are also sometimes used to predict various downstream consequences for the criers. For example, observers rated a male employee who cried over a negative performance appraisal as behaving less typically than a female counterpart (Motro & Ellis, 2017). Lower perceived typicality, in turn, led participants to penalize the male crier on crucial outcomes such as the likelihood of advancing in the company, leadership capability, and through more negative recommendation letters. More recently, Pittarello and Motro (2024) also found that when females who cried at work were perceived as manipulative, observers showed less empathy and willingness to support them in work-related outcomes.

While literature has advanced knowledge on the emerging topic of workplace crying, a current limitation is that researchers have mostly pre-selected specific crier features for examination rather than drawing on observers' lay interpretations. Consequently, only a limited range of distinct features have been assessed. At present, competence appears to be the most extensively studied feature of workplace criers. Even though other features have been examined, such as emotionality (Fischer et al., 2013) and likelihood of success (Motro & Ellis, 2017), these were used to predict perceived competence or were largely related to the construct of competence. This disproportionate focus on crier features was also observed by Picó and colleagues (2020), who highlighted that most studies examining observers' responses to crier features limit their investigations to perceived competence and warmth. The emphasis on competence in past studies may be because open displays

of distress are often associated with incompetence and dependence (Tiedens, 2001; Van Kleef et al., 2010).

It is also surprising that limited features of workplace criers have been examined, despite literature hinting at the importance of other features. For example, distress has been argued to be a precursor to crying (Davenport & Hall, 2011; Wolf et al., 2016), and stress-inducing situations are common (van den Brand, 2018). These findings suggest that workplace criers may also be seen as highly stressed. Being empathetic is another feature of criers that is ostensibly relevant to the workplace. For example, within a healthcare setting, crying at work can be an expression of empathy toward a patient's difficulties or suffering (Davenport & Hall, 2011; Janssens et al., 2019).

Theoretical accounts thus offer glimpses into other plausible and integral features of workplace criers that merit further investigation by scholars. According to Gregg and colleagues (2008, p. 979) theoretical definitions need to "comprehensively capture a phenomenon of interest... and reveal rather than conceal its richness". When empirical evidence surrounding workplace criers is theoretically supported and sufficiently incorporates the perspectives of lay observers, scholars can then make more accurate predictions about the resulting downstream consequences.

### **Non-Equivalence of Features in Characterizing Workplace Criers**

Apart from the pre-selection of crier features, it remains uncertain whether crier features differ in how strongly they characterize workplace criers. For example, participants in one study imagined arriving at work and encountering a tearful female colleague, after which they evaluated her warmth and competence (van de Ven et al., 2017). Findings showed that observers rated the tearful female colleague as warmer but less competent compared to a non-tearful target. However, according to the Stereotype Content Model (SCM), warmth is judged before competence (Cuddy et al., 2008; Fiske et al., 2007). Thus, the temporal precedence of one feature over another assumes that different features do not inherently characterize or represent workplace criers equally. This highlights the need for further examination, since the evaluation of features has been found to predict crucial outcomes for workplace criers, such as willingness to hire them (Wolf et al., 2016), willingness to work with them on a project (van de Ven et al., 2017), and perceptions of work performance (Motro & Ellis, 2017). Clarifying whether individual features characterize workplace criers to varying degrees may therefore be useful for future studies seeking to predict the likelihood and nature of downstream consequences for workplace criers.

Taken together, existing literature highlights the need to not only investigate the range of features attributed by observers to workplace criers, but also verify the extent to which these features characterize criers. The present research therefore sought to address two overarching questions:

- i) What features do the lay observers attribute to workplace criers, and do these overlap with those assessed by scholars in prior studies?
- ii) Do lay observers consider different features to be equally characteristic of workplace criers?

To explore these questions, we adopted the prototype approach (Rosch, 1973) to identify the range of features observers assigned to workplace criers and to examine how each feature was interpreted.

### **A Prototype Analysis of Workplace Criers**

The prototype approach (Rosch, 1973) has traditionally been used in the absence of scholarly consensus on a concept's definition. If a concept cannot be adequately explained by several necessary and sufficient criterial features (e.g., all birds must be feathered, small, and able to fly), it may instead lend itself to a prototype structure. That is, the concept is defined through an array of features that vary in their degree of representativeness or relevance to the concept (Rosch & Mervis, 1975).

To determine whether a concept is prototypically organized, a prototype analysis is conducted. This involves an initial free listing of the features that come to mind when participants think of a concept, such as forgiveness (Friesen & Fletcher, 2007) or infidelity (Weiser et al., 2014). Assuming the concept possesses a prototypical structure, participants would be able to generate a diverse set of features that differ in their frequency of mention. Thereafter, a separate sample typically evaluates a subset of these features based on how well each is perceived to represent the concept, i.e., how prototypical each feature is. A graded categorization of features provides partial evidence that the concept is prototypically structured; researchers would expect a continuum of ratings to emerge, which denotes varying degrees of membership – or gradedness – to a concept.

Full evidence of a concept's prototypical structure is ultimately provided if its graded categorization of features also influences participants' cognition (Rosch, 1973). To that end, latter studies in prototype analysis typically use reaction time (RT; e.g., Gregg et al., 2008; Kinsella et al., 2015) or recall and recognition tasks (e.g., Birnie-Porter & Lydon, 2013; Elshout et al., 2017) to validate the graded categorization of concept features. In undertaking such tasks, features that are more prototypical (or central) to the concept are expected to be more easily recalled or recognized than relatively less prototypical (or peripheral) features.

A large body of research has substantiated Rosch's (1975) claims by verifying the internal, prototypical structure of various concepts. To date, prototype analysis has been used to understand concepts such as friendship (Fehr, 2004), well-being (Gazal et al., 2019; Jarden et al., 2018), genocide (Mazur & Vollhardt, 2015), a lonely person (Horowitz et al., 1982), and heroes (Kinsella et al., 2015). It enables scholars to map out the content and structure of concepts that are challenging to define,

thereby clarifying lay ideas surrounding understudied concepts (Fehr, 2005; Harasymchuk & Fehr, 2012). Given this, it is well-suited to address the abovementioned limitations of existing literature. By systematically investigating whether the concept of workplace criers is prototypically organized, the present research explores the richness of observers' lay conceptions and examines the degree to which each feature represents the concept. This helps to establish a foundation for scholars to conduct more informed empirical investigations that incorporate salient, representative features of workplace criers.

### ***Links Between Prototypical Features and Traits in Person Perception Research***

In conducting the current research, it is also necessary to clarify how we conceptualize the relationship between prototypical features of a workplace crier with traits often examined in person perception research. As mentioned, warmth and competence have arguably been the most extensively examined features of criers. This is unsurprising given the substantial support for the SCM, which postulates that humans make sense of others based on these fundamental, "Big Two" dimensions comprising specific traits, e.g., warmth, trustworthiness, and friendliness for the dimension of warmth; and competence, intelligence, and skillfulness for the dimension of competence (Fiske, 2018; Fiske et al., 2002). Emotionality is also central to the act of crying and, thus, has been another previously explored dimension. One clear example is from Fischer and colleagues (2013), where participants evaluated criers in different contexts on their emotionality, which included the traits "emotional", "sensitive", and "compliant".

Given the prominence of these dimensions in the literature, we can reasonably expect a degree of overlap between them and prototypical features of workplace criers. This is because, while a prototype analysis encourages top-down processing to access one's abstract representation of a concept, it essentially taps into a general, culturally shared store of relational knowledge (Fehr, 2005). We surmise that this same storehouse of knowledge is consulted, perhaps in part, during bottom-up processing and perceptions of specific individuals, as reported in prior studies. Fischer and colleagues (2013) provide some evidence for this by demonstrating how participants evaluating crying individuals made gender-stereotypical inferences, even when images of the criers and reasons for crying were provided. Notably, these inferences were also made in employment contexts, where crying men were perceived as more emotional, sadder, and less competent than crying women.

We therefore anticipate that when asked to think of a workplace crier without additional context, laypeople would likely form impressions that are prevalent not only in literature but also in society. These impressions could encompass specific traits within the warmth and competence dimensions, which are fundamental to person perception and have explained substantial variance in individual impressions (Fiske, 2018). However, prototypical features of workplace criers may not necessarily capture all facets of these Big Two dimensions. This is because

laypersons are thought to occasionally access another storehouse of knowledge that is more anchored in personal experiences (Fehr, 2005). If so, certain freely generated features of workplace criers may be more idiosyncratic in nature, though we expect these to be relatively less frequent.

### ***Disentangling Workplace Criers From Criers in General***

Finally, another crucial factor to consider is whether the concept of a workplace crier can be meaningfully and reliably distinguished from the concept of a crier in general. Cognitive science maintains that in knowledge representation, mental categorization occurs hierarchically on three levels - superordinate, basic, and subordinate - which reflect differing degrees of abstraction (Rosch et al., 1976). In this regard, a general crier may be categorized at the basic level, which is also the most frequently accessed. If so, a workplace crier may be categorized at the subordinate level as a type of crier. This means the two concepts share a fairly strong degree of commonality, perhaps in terms of some frequently examined signals of crying, such as helplessness, sadness, greater agreeableness, and lower hostility (Hendriks et al., 2008; Miceli & Castelfranchi, 2003; Vingerhoets et al., 2016). However, since workplace criers represent a specific profile of criers, this concept may also be subject to relatively less generalized, abstracted representations. In other words, the situational demands and experiences within a professional environment would likely direct laypersons to generate prototypical features that align with those of a general crier, as well as features that reflect internal states more closely associated with the workplace (e.g., professionalism, stress, lack of motivation).

Our focal objectives in conducting a prototype analysis of workplace criers are, therefore, to uncover how laypeople conceptualize a workplace crier and whether these conceptions differ in how strongly they characterize the individual. In so doing, we also aim to identify the extent to which lay conceptions mirror scholarly definitions of a workplace crier and whether there are distinct features that may have received sparse attention but emerge as important differentiators of the concept.

### **Overview of Studies**

Three studies were conducted to examine lay conceptions of workplace criers using the prototype approach. The research was approved by our university's Institutional Review Board (IRB-2019-09-033). Study 1 explored the range of features observers ascribed to workplace criers, while Studies 2 and 3 tested whether the concept was prototypically structured. Across the studies, full-time employees in Singapore participated through student-assisted recruitment (Study 1 and 3) and convenience sampling (Study 2). The overall sample size in each study was also comparable to those of previous prototype studies (e.g., Elshout et al., 2017; Harasymchuk & Fehr, 2012; Mazur & Vollhardt, 2015). Data and materials for all studies are shared on Open Science Framework (OSF), and can be accessed here: <https://doi.org/10.17605/OSF.IO/84AE2>

## Study 1

In Study 1, employees completed a free-response task where they listed features associated with workplace criers. If the concept is prototypically organized, a wide range of features surrounding the concept should be obtained, and these should also differ in the frequency with which they are listed. For example, past studies have yielded 63 features with a wide frequency range (2.31–65.28%) for the concept of gratitude (Morgan et al., 2014), and 74 features with a similarly extensive frequency range (3.54–47.98%) for the concept of prayer (Lambert et al., 2011). Conversely, if a concept is not prototypically organized, participants would generate only a handful of features with little variance in their frequency.

With regard to features of workplace criers, examples such as competence, warmth, emotionality, and professionalism have been examined (e.g., Fischer et al., 2013; Janssens et al., 2019; Motro & Ellis, 2017; Pitarello & Motro, 2024; van de Ven et al., 2017; Wolf et al., 2016). However, literature also suggests that, based on the antecedents of workplace crying (e.g., stressful situations, witnessing others suffer), criers may be characterized as stressed and empathetic, among other features. In conducting Study 1 from an exploratory perspective, we were therefore interested in the question: “What features do the lay observers ascribe to workplace criers, and how frequently are these features ascribed?”

## Methods

### *Participants*

One hundred and sixty-three full-time employees (102 females) were recruited through Psychology undergraduates who participated for course credit. Students assisted with recruitment by completing an online registration form that required them to provide the contact details of their referred participant. The inclusion criteria were that participants had to be at least 21 years old and employed full-time in an organization in Singapore. Upon receiving the registrations, we sent each participant an invitation to complete the study.

Participants were employed in various industries, such as human resources, aviation, manufacturing, education, and banking. Due to one participant providing insufficient demographic information, demographic data was based on the remaining sample of 162 participants. The mean age was 36.77 years ( $SD = 12.51$ ), and the mean length of employment was 13.71 years ( $SD = 12.88$ ).

### *Materials*

A free-response, list generation task was used (see Supplementary Note S1). The task has maintained a similar format across previous prototype studies, with instructions often adapted from Fehr and Russell’s (1984, Study 6) study on the prototypical features of emotion. We followed similar instructions, using specific examples from Horowitz and colleagues’ (1982) study on the prototype structure of

a lonely person. The task instructed participants to freely list their impressions of employees who cried at work as much as possible, and a list of 20 text boxes was then provided for them to enter their responses. To determine this response limit, we referenced several prototype studies that used the same limit (e.g., Birnie-Porter & Lydon, 2013; Kearns & Fincham, 2004; Neto & Mullet, 2014). We also reviewed the mean number of responses generated by participants across numerous (> 30) prototype studies and determined that this limit would serve as a conservative estimate for participants to adequately list all their perceptions of workplace criers.

### ***Procedure***

The study was conducted entirely online, and data was collected using Qualtrics. Participants initially received an email with the study instructions, a survey link, and their unique participant ID. Upon accessing the link, they were presented with a digital consent form containing pertinent information about the study. Afterward, the participants were asked to provide demographic information before completing the list generation task. There was no time limit, and they could list up to twenty features. After completing the task, they were directed to a final page that contained debriefing details. Upon receiving their survey submission, we sent participants a confirmation email and awarded course credit to the undergraduate student who referred them.

## **Results**

### ***Data Processing***

In accordance with prototype analysis (e.g., Fehr, 1988; Hepper et al., 2012; Kearns & Fincham, 2004), participants' free responses were coded and finalized over several steps adapted from Rosenberg and Jones (1972). The coding was conducted by the first author and another graduate student.

First, linguistic units were extracted from all responses listed by participants. Coding for monolexemic responses (e.g., "Expressive", "Anti-social") was straightforward because these could be classified as distinct linguistic units. Responses containing modifiers (e.g., "Very emotional") were also considered single linguistic units. However, those listed as phrases (e.g., "Rather young [age of experience wise]") required more discussion between the two coders to determine whether the phrase could be classified as a single unit based on its meaning or segmented into several units. Linguistic units unrelated to the personal characteristics of workplace criers were also removed. These included illogical responses or those that described reasons for crying instead (e.g., "traffic jam on the way to work", "someone speaking ill of the employee").

Next, the linguistic units were coded into individual features. Units were grouped if they were semantically similar (e.g., "Anti-social" and "Avoids social contact"), were variants of the same word (e.g., "Meek" and "Timid"), or differed only by modifiers such as "too" or "very". Because we were assessing responses

captured from lay observers, coding decisions were based on the need to balance scholarly definitions with everyday, generally accepted definitions that observers would likely use when listing their responses. For example, although worry and anxiety are regarded as distinct yet overlapping constructs in scholarly literature (Zebb & Beck, 1998), the Merriam-Webster dictionary defines worry as “to afflict with mental distress or agitation: make anxious” and “to experience concern and anxiety”, which are synonymous with anxiety. Hence, the coding decision was to combine units mentioning worry and anxiety into a single feature. To remain true to the tradition of coding in prototype studies, we adopted a conservative approach to ensure every unit was adequately represented. However, we also checked that redundant words and phrases were not classified as distinct features. There was a high level of agreement between the two coders (Cohen’s  $\kappa = .92$ ), and any discrepancies were resolved by a third graduate student coder. Among the features, we identified those that were idiosyncratic (i.e., mentioned by only one participant) and removed them.

Lastly, we addressed the duplicate linguistic units which were instances where a single category contained several responses from the same participant. Since comparing the data with and without duplicate units showed a high degree of similarity, the duplicate units from each feature were removed.

### *Frequencies*

Participants experienced little or no difficulty generating features of workplace criers, since the extraction procedure yielded 618 linguistic units. After eliminating idiosyncratic features and duplicate linguistic units, the final data set comprised 51 features based on 511 linguistic units (see Table 1). This number of features also falls within the range typically derived in past prototype studies (e.g., Fehr, 1988; Kinsella et al., 2015; Neto & Mullet, 2014).

**Table 1**  
*Examples of Linguistic Units Within Each Feature (Study 1)*

No.	Feature	Examples of Linguistic Units
1	Stressed	Stressed, Too stressed
2	Emotional	Emotional, Has emotional character
3	Overwhelmed	Overwhelmed, Person is overwhelmed
4	Needs assistance	Requires some sort of help or assistance, Needs to be offered help
5	Fatigued	Exhausted, Jaded
6	Weak	Weak, Not tough enough for the workplace
7	Lonely	Lonely, They feel alone in their journey
8	Pressured	Pressured, Feel pressured
9	Anxious	Anxious, Worried
10	Has poor self-regulation	Not capable of managing own emotions, No stress management skills
11	Needs company	They need a listening ear, Should talk to people

No.	Feature	Examples of Linguistic Units
12	Sensitive	Sensitive, Might take things personally
13	Vulnerable	Vulnerable, Person cannot fend for themselves
14	Lost	Lost, Feels lost
15	Unprofessional	Unprofessional, Unprofessional conduct
16	Low self-esteem	Low self-esteem, Lack of confidence
17	Needs space	Needs personal space, May wish to be alone for now
18	Introverted	Introvert, Quiet
19	Empathetic	More empathetic, Empathizes with others
20	Expressive	Expressive, Emotionally expressive
21	Physically unwell	Medically unwell and unfit, Sick
22	Unmotivated	Unmotivated, No drive
23	Mentally unwell	Mentally unstable, Could be having some mental health needs
24	Incompetent	Incompetent in work ability, Not capable
25	Inexperienced	Inexperienced, No job experience; first time working
26	Manipulative	Manipulation (staff who cry every time they make a mistake which maybe routine etc.), Some use this as a tool to seek attention or support
27	Needs encouragement	They need encouragement, Hope his colleagues can encourage him/her more
28	Authentic	Authentic, Down to earth
29	Disruptive	Unnecessary disturbing in work, Affects other colleagues
30	Female	Females, Young girls who start work a few weeks
31	Insecure	Insecure
32	Young	Young, Rather young
33	Anti-social	Anti-social, Avoids social contacts
34	Unable to compartmentalize	Cannot compartmentalize, Might not be able to separate personal life/problems from work
35	Ignorant	Ignorant, Lack of knowledge
36	Brave	Brave, Courageous
37	Needs a break	Needs a break, Someone who requires a break/change of scene
38	Requires counseling	Might require counseling, Should go for therapy
39	Not adaptable	Not adaptable, Unable to adapt to the environment
40	Unable to vocalize	Could not express their thoughts or feelings, When they feel being suppressed
41	Pessimistic	Negative, Negative thinking
42	Trusting	Trust others, Trust
43	Closed-minded	Narrow-minded, Not open
44	Emotionally intelligent	High EQ, Comfortable with feelings
45	Has mood swings	PMS, Menopause
46	Spoilt	Must have been used to being pampered, Too sheltered
47	Timid	Timid, No courage
48	Unfocused	Lack of focus, Not focused
49	Lacks teamwork	No team work, Not a team member
50	Emotionally incompetent	Low EQ, Insensitive
51	A failure	Someone who has failed/not lived up to expectations, Failure

Among the 51 features, “Stressed” was by far the most frequently mentioned feature of workplace criers (57.06% of participants; see Table 2). This was followed by features such as “Emotional” (23.93%), “Overwhelmed” (17.18%), and “Needs assistance” (15.95%). Other than “Stressed”, “Empathetic” was mentioned in accordance with literature, though by only a small fraction of participants (3.68%). Features previously assessed by other researchers included “Unprofessional” (5.52%) and “Incompetent” (3.68%).

**Table 2**  
*Frequencies of Free Listing for Features of Workplace Criers (Study 1)*

Feature	Total (%; <i>n</i> = 163)	Males (%; <i>n</i> = 61)	Females (%; <i>n</i> = 102)
Stressed	57.06	47.54	62.75
Emotional	23.93	22.95	24.51
Overwhelmed	17.18	8.20	22.55
Needs assistance	15.95	19.67	13.73
Fatigued	14.72	11.48	16.67
Weak	14.11	9.84	16.67
Lonely	13.50	8.20	16.67
Pressured	11.04	13.11	9.80
Anxious	10.43	11.48	9.80
Has poor self-regulation	9.82	6.56	11.76
Needs company	8.59	9.84	7.84
Sensitive	8.59	3.28	11.76
Vulnerable	7.98	4.92	9.80
Lost	6.13	3.28	7.84
Unprofessional	5.52	6.56	4.90
Low self-esteem	4.91	4.92	4.90
Needs space	4.91	4.92	4.90
Introverted	4.29	3.28	4.90
Empathetic	3.68	1.64	4.90
Expressive	3.68	3.28	3.92
Physically unwell	3.68	3.28	3.92
Unmotivated	3.68	4.92	2.94
Mentally unwell	3.68	1.64	4.90
Incompetent	3.68	3.28	3.92
Inexperienced	3.68	4.92	2.94
Manipulative	3.68	1.64	4.90
Needs encouragement	3.68	1.64	4.90
Authentic	3.07	3.28	2.94
Disruptive	3.07	6.56	0.98
Female	2.45	1.64	2.94
Insecure	2.45	1.64	2.94
Young	2.45	1.64	2.94
Anti-social	1.84	1.64	1.96
Unable to compartmentalize	1.84	0	2.94

Feature	Total (%; <i>n</i> = 163)	Males (%; <i>n</i> = 61)	Females (%; <i>n</i> = 102)
Ignorant	1.84	1.64	1.96
Brave	1.84	0	2.94
Needs a break	1.84	4.92	0
Requires counseling	1.84	4.92	0
Not adaptable	1.84	0	2.94
Unable to vocalize	1.84	0	2.94
Pessimistic	1.23	0	1.96
Trusting	1.23	0	1.96
Closed-minded	1.23	1.64	0.98
Emotionally intelligent	1.23	0	1.96
Has mood swings	1.23	0	1.96
Spoilt	1.23	1.64	0.98
Timid	1.23	0	1.96
Unfocused	1.23	3.28	0
Lacks teamwork	1.23	0	1.96
Emotionally incompetent	1.23	0	1.96
A failure	1.23	3.28	0

Examples of the least mentioned features included “Unfocused”, “Lacks teamwork” and “Emotionally incompetent”, which were mentioned by only 1.23% of participants. Taken together, Study 1 showed that participants listed both previously examined features and others that were relatively understudied. The range of frequencies across features was extensive (1.23–57.06%), which denoted a large variability and was also comparable to those of past prototype studies (e.g., 4.50–51.80% in Friesen and Fletcher, 2007; 0.97–52.43% in Mazur and Vollhardt, 2015).

## Discussion

Study 1 demonstrated how employees’ ascribed features of workplace criers were not restricted to several ones that had been empirically tested. As discussed, competence has arguably remained the most commonly examined feature. However, only 3.68% of employees listed it, thereby indicating its limited accessibility compared to other features that employees attributed to workplace criers. It is nonetheless worth noting that the linguistic units within this feature (e.g., “Not capable”, “Inefficient”) appeared to correspond to two existing traits within the competence dimension: competence and efficiency, respectively. Other features (e.g., being unprofessional, traits within the warmth dimension) assessed in the literature (Creter et al., 1982; Elsbach & Bechky, 2018; Fischer et al., 2013; Soares, 2003; van de Ven et al., 2017) were each listed by fewer than 10% of employees or did not emerge, similarly suggesting that only a small fraction of employees regarded such features as descriptive of workplace criers in general.

On the contrary, being stressed, emotional, and needing assistance were among the most frequently listed features. Being sensitive was also mentioned relatively

often, suggesting that traits within the dimension of emotionality were rather well captured by lay perceptions. While emotionality and the possible need for assistance have been examined to some degree (Fischer et al., 2013; van de Ven et al., 2017), observers' view of workplace criers as stressed has received arguably less attention from scholars, even though distress is a commonly described trigger of workplace crying and stressful situations are plentiful in the workplace (van den Brand, 2018; Wolf et al., 2016).

Taken together, employees' ascribed features of workplace criers included some of those previously measured in research, as well as many others that have received relatively limited attention. Findings from Study 1 suggest that, when thinking about workplace criers in general, employees more often consider them as stressed and emotional; this is relative to other previously assessed features of the crier (e.g., incompetent, unprofessional, or warm). In addition, the wide range of frequencies reinforces that employees do not always ascribe the same one or two features to workplace criers. Instead, lay conceptions may include a combination of several features at a given time, and this combination is likely contingent on how participants construed an average, or generalized, workplace crier. There was also a modest overlap between lay conceptions and those previously assessed in research, highlighting the need to further examine the conditions under which these features are assigned, while also developing subsequent studies that incorporate salient features.

## Study 2

As a follow-up to Study 1, Study 2 tested whether this range of features differed in the extent to which they characterized workplace criers. As mentioned, one of the criteria for verifying whether a concept possesses a prototype structure is identifying features surrounding the concept and the presence of graded categorization (Rosch, 1973). This involves evaluating how strongly each feature represents the concept, with consensus on which features are central or peripheral. Furthermore, the more central a feature is, the more likely it is to be recalled (Rosch, 1973).

We administered a prototypicality rating task in Study 2, where participants evaluated how strongly each feature represented workplace criers. If the features are prototypically organized, one would expect a wide distribution of ratings. Features with high ratings would be classified as central features (i.e., those most representative of workplace criers), while those with relatively lower ratings would be classified as peripheral features (i.e., those least representative of workplace criers). Moreover, since central features are recalled more rapidly, prototypicality ratings for the features should be positively associated with their frequencies obtained in Study 1.

Thus, our hypotheses for Study 2 were:

$H_1$ : Prototypicality ratings would form a graded categorization across features, with a wide variability of scores generated.

$H_2$ : There would be a positive association between the prototypicality ratings of features and their respective frequencies.

## **Methods**

### ***Participants***

One hundred and three employees were recruited through convenience sampling. Data from six employees was removed because they were either repeats from Study 1 or were not working full-time at the time of testing. Thus, the final sample consisted of 97 full-time employees (67 females). A sensitivity analysis for the correlational analysis showed that our sample could reliably detect a minimum effect size of .28 with 80% power.

Because three participants provided incomplete demographic information, the following demographic data was based on the remaining sample of 94 participants. They came from a variety of industries such as banking, healthcare, social services, and real estate. Their mean age was 40.93 years ( $SD = 11.40$ ), and their mean length of employment was 16.48 years ( $SD = 11.50$ ).

### ***Materials***

Thirty features from Study 1's list of 51 were selected for the prototypicality rating scale (see Supplementary Note S2). Although extracting a subset of features from the original list is common practice in prototype research and minimizes response fatigue (Fehr & Sprecher, 2009), this inclusion criterion may be arbitrary in nature. To address this, we determined frequency boundaries by computing quartiles. Specifically, we computed the upper quartile (top 25%), interquartile range (middle 50%), and lower quartile (bottom 25%) of frequency ratings from Study 1 – these were categorized as high, mid, and low frequency ratings, respectively. Ten features from each frequency category were then randomly selected for inclusion in the prototypicality rating scale, and every participant rated the same 30 features once. The features were rated on a 9-point Likert scale ( $\alpha = .92$ ) adapted from Fehr and Sprecher (2009; 1 = *Not at all representative of workplace criers*, 9 = *Extremely representative of workplace criers*). The presentation order of features in the prototypicality rating task was also randomized for all participants.

### ***Procedure***

Like Study 1, Study 2 was conducted online using Qualtrics. Participants first provided informed consent before proceeding to a series of demographic questions. They then completed the prototypicality rating task, followed by two additional scales used to explore secondary questions. Within the prototypicality rating task, the presentation of items was also randomized to control for order effects. Upon completion of all sections, participants were directed to the debriefing page of the study.

## Results

The mean prototypicality ratings for all 30 features are presented in Table 3. Ratings fell between 3.19 to 6.72, a range comparable to those in earlier prototype studies (e.g., Le et al., 2008; Kito, 2016; Sorensen et al., 2016). Among the features, “Stressed”, “Overwhelmed” and “Emotional” received the highest ratings (6.72, 6.64, and 6.36 respectively). Conversely, “Unprofessional”, “Unmotivated” and “Anti-social” received the lowest ratings (3.57, 3.43, and 3.19 respectively). The wide variability in prototypicality ratings thus constituted a graded categorization for features of workplace criers, which supported  $H_1$ .

**Table 3**  
*Prototypicality Ratings for Features of Workplace Criers (Study 2)*

Feature	Prototypicality	
	<i>M</i>	<i>SD</i>
<b>Stressed</b>	6.72	2.04
<b>Overwhelmed</b>	6.64	2.09
<b>Emotional</b>	6.36	2.11
<b>Sensitive</b>	6.02	1.97
<b>Anxious</b>	5.74	2.12
<b>Vulnerable</b>	5.67	2.07
<b>Needs assistance</b>	5.54	2.38
<b>Female</b>	5.49	2.24
<b>Empathetic</b>	5.24	1.93
<b>Authentic</b>	5.08	2.07
<b>Trusting</b>	4.85	2.13
<b>Timid</b>	4.61	2.16
<b>Emotionally intelligent</b>	4.56	2.02
<b>Pessimistic</b>	4.48	2.08
<b>Not adaptable</b>	4.47	2.00
Has poor self-regulation	4.45	1.96
Young	4.42	2.16
Inexperienced	4.41	1.99
Brave	4.39	2.21
Lonely	4.30	2.23
Weak	4.25	2.25
Introverted	4.03	2.11
Spoilt	4.02	2.06
Incompetent	3.79	2.18
Ignorant	3.71	1.97
Manipulative	3.69	1.95
Unfocused	3.68	2.02
Unprofessional	3.57	2.11
Unmotivated	3.43	2.16
Anti-social	3.19	1.95

*Note.* Feature categories in bold denote central categories, based on a median split of prototypicality ratings.

To ensure adequate interrater reliability of the prototypicality ratings, two indices were computed (Lambert et al., 2009). First, we generated the intraclass correlation coefficient (ICC), which is the average of all split-half correlations from the 97 participants in relation to the 30 features. The ICC was  $.92, p < .001$ , indicating excellent internal consistency of the prototypicality ratings. We also transposed the data matrix such that the 30 features were regarded as cases, and the 97 participants as items. Results from this transposed matrix demonstrated a similarly high internal consistency ( $\alpha = .96$ ). Collectively, these values indicated that participants exhibited substantive agreement in their evaluations of feature prototypicality.

To test  $H_2$ , we computed the correlation between feature frequencies from Study 1 and Study 2's prototypicality ratings. There was a significant positive association between feature frequency and prototypicality,  $r(28) = .63, p < .001$ , suggesting that frequently listed features were also judged as more typical of workplace criers.<sup>1</sup> This effect size was generally larger than those reported in existing prototype literature, which tended to be more modest (e.g.,  $.32$  and  $.34$  in May and Fincham, 2018;  $.59$  in Seuntjens et al., 2014;  $.42$  in Weiser et al., 2014). Given the significant, positive association between feature frequency and prototypicality,  $H_2$  was also supported.

In line with previous prototype studies, we performed a median split on the prototypicality ratings to categorize central and peripheral features. Although feature prototypicality exists on a continuum, a median split is nonetheless useful in providing researchers with a working benchmark to facilitate further testing of differences between features of a concept (e.g., Elshout et al., 2017; Kinsella et al., 2015; Seuntjens et al., 2014). Ratings above the median of 4.46 were then categorized as central features, and those below the median as peripheral features (see Table 3). To further justify this division, a paired samples  $t$ -test confirmed that prototypicality ratings for central features ( $M = 5.43, SD = .77$ ) were significantly higher than ratings for peripheral features ( $M = 3.96, SD = .41$ ),  $t(14) = 13.94, p < .001, d = 3.60$ .

## Discussion

Study 2 provided further evidence supporting a prototype structure for features of workplace criers. Importantly, the requisite condition of graded categorization was met through the range of prototypicality ratings that emerged across features, as well as employees' consensus on how strongly each feature represented workplace criers. Surprisingly, features that were highlighted in prior research (e.g., incompetent, unprofessional) were judged as less representative of workplace criers; this also aligns with the pattern observed in Study 1's frequency rankings.

---

<sup>1</sup> Spearman's  $\rho$  was also computed using the rank orderings of both variables, as opposed to their raw values. Although the magnitude of the positive association was smaller, the result was nonetheless significant,  $\rho(28) = .40, p = .030$ .

Central features of workplace criers also tended to be more frequently mentioned in Study 1. This supports Rosch's (1973) postulation that central features of a concept are generally accompanied by ease of recall. There were, however, a few exceptions. For example, central features such as "trusting", "timid" and "pessimistic" had a very low frequency of mention in Study 1. This may be attributed to how Study 1 and 2's methodologies captured varying facets of memory – specifically, feature generation in Study 1 relied on recall, while feature evaluation in Study 2 relied on recognition (Fehr & Sprecher, 2009). Even so, central and peripheral features for Study 3 were selected based on prototypicality ratings, because although frequency may indicate the possibility of a feature being present in a concept, prototypicality indicates whether the feature is a discriminant aspect of the concept (Birnie-Porter & Lydon, 2013).

Lastly, being stressed emerged as a highly salient feature of workplace criers, as it was mentioned most frequently in Study 1 and rated as most representative in Study 2. However, it remains uncertain whether employees, in their snap judgments of workplace criers, indeed regarded being stressed as a primary feature that preceded other highly prototypical ones. Thus, we designed Study 3 to test this possibility.

### Study 3

The goals of Study 3 were twofold. The first was to continue validating the prototype structure for features of workplace criers by assessing its potential effects on implicit cognition. In addition, we attempted to verify whether feature frequency (Study 1) and prototypicality (Study 2) were each associated with the precedence of associations toward workplace criers. Here, we defined precedence as how quickly one attributed a certain feature to workplace criers relative to other features. Given that studies 1 and 2 utilized explicit measures to generate features and prototypicality ratings, we adopted an RT paradigm to assess whether participants' response speed varied with the graded categorization of features presented.

The RT task was closely adapted from previous prototype studies (e.g., Fehr & Russell, 1991; Fehr & Sprecher, 2009) and modified to suit the purposes of this study. It required participants to respond to target trials asking whether a central or peripheral feature was typical of workplace criers. To ensure participants were paying attention during the task, false versions of these trials were also created in which the focal concept (i.e., workplace criers) was replaced with everyday objects (e.g., paper, lettuce), thereby rendering each false question illogical.

Since Study 2 found that central features of workplace criers were generally more representative compared to peripheral ones, one can be reasonably confident that people would quickly verify these features as being related to workplace criers.

Thus, we hypothesized the following:

*H*<sub>3</sub>: Central features will be verified more quickly than peripheral features, and this effect will be more pronounced for target trials than for false-target trials.

Because feature frequency and prototypicality were also found to be positively associated in Study 2, and prototypicality should lead to greater precedence through shorter response latencies, we tested two additional hypotheses:

$H_{4a}$ : Feature frequency will be related to its precedence, such that higher frequency corresponds to shorter response latency.

$H_{4b}$ : Feature prototypicality will be related to its precedence, such that higher prototypicality ratings correspond to shorter response latency.

## Methods

### *Participants*

We adopted the same student-assisted procedure as in Study 1 and recruited 162 full-time employees working in Singapore (97 females). A sensitivity analysis for a paired samples t-test also showed that our sample was able to reliably detect a minimum effect size of .22 with 80% power. Because two participants provided incomplete details, the following demographic information was based on the remaining sample of 160 participants. They came from various industries, including education, manufacturing, construction, banking, and retail. Their mean age was 42.98 years ( $SD = 12.73$ ), and mean length of employment was 19.63 years ( $SD = 12.98$ ).

### *Materials*

The RT task consisted of 5 practice trials and 60 main trials administered using Inquisit version 5.0.14.0. Inquisit has been widely used in psychological research (e.g., Back et al., 2010; Gieseler et al., 2020; Knowles et al., 2010) and possesses millisecond accuracy for responses entered on keyboards (De Clercq et al., 2003).

The format of the RT task was adapted from previous prototype studies (e.g., Fehr & Russell, 1991; Fehr & Sprecher, 2009). Each trial included a question structured as “Is X typical of Y?”, with participants having to choose between “Yes” or “No” options by pressing the “F” or “J” key respectively. Five practice trials adapted from Lim’s (2012) prototype study were also included (e.g., “Is sharpness typical of knives?”) so that participants could familiarize themselves with the trial format before attempting the main trials.

The 60 main trials consisted of target trials, false target trials, and filler trials (see Supplementary Note S3). There were 20 target trials on workplace criers, with 10 questions incorporating central features (e.g., “Is being overwhelmed typical of workplace criers?”) and 10 questions incorporating peripheral features (e.g., “Is being ignorant typical of workplace criers?”). In line with past practice, features that were phrases were excluded and only monolexemic features were used, since question length could influence response latencies.

In addition, there were 20 false target trials. These were identical in format to target trials, with the concept “workplace criers” being replaced by everyday objects (e.g., spinach, chairs), which resulted in the questions being illogical. An example was, “Is being overwhelmed typical of napkins?” (false target trial with a central feature). All objects referenced were taken from Lim’s (2012) prototype study.

Lastly, we included 20 filler trials as part of an exploratory analysis (see Supplementary Note S5). These trials contained features taken from Fehr’s (1988) study on lay conceptions of love and were unrelated to our examination of perceptions toward workplace criers.

### ***Procedure***

The study was conducted online using the Inquisit Web platform. Inquisit Web enabled us to collect data remotely instead of being restricted to a physical site, which would have been largely unfeasible for employee participants.

Participants received an email invitation containing the study instructions and their participant ID. They were also informed that the study could only be completed on a laptop or desktop, since they would need to install the Inquisit player. Upon doing so, participants provided their informed consent and were directed to the instructions for the RT task. Thereafter, they were presented with the first block of five practice trials before proceeding to the second block of 60 main trials. Within each block, the trials were presented in a randomized order, and each trial appeared onscreen for 10,000 ms. If participants responded within this timeframe, the trial would conclude and the next one would be shown; however, if no response was made during this time, the trial would automatically progress to the next one. Due to the relatively short duration of the RT task, no breaks were included between trials. After the RT task, participants completed a scale that was used to explore secondary questions before answering demographic items and concluding the study.

## **Results**

### ***Data Processing***

Prior to analysis, the data was processed over several steps (see Supplementary Note S6). Response latencies for the practice trials, while recorded, were not analyzed. For the 60 target trials, response latencies greater than 3 *SDs* above the global mean were removed (e.g., Fehr & Sprecher, 2009; Kinsella et al., 2015). Those falling below a lower boundary of 900 ms were also excluded. This lower boundary was determined based on a comparison of response latencies in the above studies, since these studies used statements that were syntactically similar to those we used. In total, the exclusion criteria culminated in the removal of 2.93% of the data points, which was within the range of prototype studies (e.g., 3% in Kinsella et al., 2015; 4.32% in Kito, 2016; 2.36% in Le et al., 2008).

**Relationships between “Yes” Responses and Previously Derived Variables**

We analyzed the frequency of “Yes” responses for target trials along with their i) prototypicality ratings from Study 2 and ii) frequencies of mention from Study 1. Table 4 presents the frequency of “Yes” responses for target trials.

**Table 4**

*Response Latencies for “Yes” Responses to Target Trials (Study 3)*

Feature in Target Trial Statement	Number of “Yes” responses ( $n = 162$ )	Response Latency (ms)	
		<i>M</i>	<i>SD</i>
<b>Stressed</b>	134	2982.40	1443.49
<b>Overwhelmed</b>	131	3419.11	1906.87
<b>Emotional</b>	140	3338.98	1656.46
<b>Sensitive</b>	129	3469.20	1880.97
<b>Vulnerable</b>	116	3555.05	1982.30
<b>Female</b>	63	4074.15	1624.86
<b>Empathetic</b>	80	4123.81	2081.54
<b>Authentic</b>	65	4139.21	2010.43
<b>Trusting</b>	55	4163.55	2066.95
<b>Pessimistic</b>	89	3749.10	2052.03
Brave	37	3820.58	1665.04
Young	47	3547.20	1625.69
Lonely	88	3575.25	1768.18
Weak	80	3403.81	1589.95
Spoilt	51	3940.32	1757.64
Incompetent	57	3961.78	1918.44
Unfocused	63	3941.87	1831.97
Ignorant	47	3738.07	1751.71
Unmotivated	64	3990.64	1924.04
Anti-social	53	3608.13	1723.98

*Note.* All target trial statements are in the form, “Is being X typical of workplace criers?”, where “X” is a monolexemic feature; features in bold denote central features.

At a glance, “Yes” responses declined with feature prototypicality as expected. To verify this, Pearson’s bivariate correlations were performed. There was a strong positive association between the frequency of “Yes” responses and prototypicality ratings,  $r(18) = .79, p < .001$ , and a strong positive association between the frequency of “Yes” responses and frequencies of mention,  $r(18) = .80, p < .001$ . Thus, as features declined in their representativeness and how frequently they came to mind, they also tended to be verified less often as typical of workplace criers.

**Response Latencies for “Yes” Responses**

In aligning with the tradition of prototype research, response latencies for trials wherein participants responded “Yes” were selected for analysis. Thus, “Yes” responses to the 20 target trials were analyzed (see Table 4 for the mean response latencies of each target trial). As expected, participants responded faster to statements containing central features ( $M = 3688.62, SD = 1272.97$ ) than to those containing

peripheral features ( $M = 3924.74$ ,  $SD = 1366.51$ ) of workplace criers,  $t(134) = 2.08$ ,  $p = .039$ ,  $d = 0.18$ . The 20 false target trials were also analyzed, and we found no difference in response latencies between central features ( $M = 4207.70$ ,  $SD = 1272.08$ ) and peripheral features ( $M = 4198.18$ ,  $SD = 1664.79$ ) presented in the false target trials,  $t(47) = .035$ ,  $p = .97$ ,  $d = 0.005$ . Hence, results from the analyses of “Yes” responses supported  $H_3$ .

### **Response Latencies for “No” Responses**

In addition to examining whether participants would more quickly confirm that central features, compared to peripheral ones, were typical of workplace criers, we also assessed whether they would more quickly disconfirm that peripheral features, compared to central ones, were typical of workplace criers. This strengthened the robustness of the prototypical organization for crier features by reinforcing how participants’ implicit associations conformed to the categorization of central and peripheral features.

All 20 target and 20 false target trials were analyzed again. For the target trials, participants were indeed quicker to disconfirm statements containing peripheral features ( $M = 3734.12$ ,  $SD = 1126.22$ ) than those containing central features ( $M = 3955.10$ ,  $SD = 1407.09$ ) of workplace criers,  $t(145) = 2.15$ ,  $p = .033$ ,  $d = 0.18$  (see Table 5 for the mean response latencies of each target trial). An analysis of the false target trials also showed no difference in response latencies between illogical statements containing

**Table 5**  
*Response Latencies for “No” Responses to Target Trials (Study 3)*

Feature in Target Trial Statement	Response Latency (ms)	
	<i>M</i>	<i>SD</i>
<b>Stressed</b>	4157.65	1985.49
<b>Overwhelmed</b>	3862.44	1339.86
<b>Emotional</b>	4683.35	2472.15
<b>Sensitive</b>	3740.30	1635.12
<b>Vulnerable</b>	3953.54	2167.98
<b>Female</b>	3519.24	1662.12
<b>Empathetic</b>	4430.39	1962.45
<b>Authentic</b>	4071.47	1763.94
<b>Trusting</b>	4051.35	1919.71
<b>Pessimistic</b>	3956.15	1893.86
Brave	3580.45	1615.21
Young	3632.77	1598.99
Lonely	3894.93	1875.88
Weak	3841.05	1968.98
Spoilt	3399.48	1754.42
Incompetent	3585.02	1812.27
Unfocused	3693.60	1722.15
Ignorant	3678.51	1756.17
Unmotivated	4114.46	1705.23
Anti-social	3549.42	1713.13

*Note.* All target trial statements are in the form, “Is being X typical of workplace criers?”, where “X” is a monolexemic feature; features in bold denote central features.

peripheral features ( $M = 3033.04$ ,  $SD = 1200.26$ ) and those containing central features ( $M = 3082.11$ ,  $SD = 1255.76$ ),  $t(161) = .78$ ,  $p = .44$ ,  $d = 0.06$ .

### ***Relationships Between Response Latencies and Previously Derived Variables***

Pearson's bivariate correlations were computed to assess the relationships between (i) feature frequency and response latency and (ii) feature prototypicality and response latency. Only latencies for "Yes" responses to target trials were included in the analysis, which showed a strong negative association between frequency and response latency,  $r(18) = -.77$ ,  $p < .001$ . This supported  $H_{4a}$ , where the more frequently a feature was listed, the higher its precedence since participants were quicker to associate it with workplace criers. Similarly, a moderate, negative association was obtained between prototypicality and response latency,  $r(18) = -.47$ ,  $p = .037$ , where features more representative of workplace criers were also more swiftly associated with the same. Thus,  $H_{4b}$  was also supported.

### **Discussion**

In Study 3, the prototype structure for features of workplace criers was validated by testing and fulfilling Rosch's (1975) second criterion. Specifically, the graded categorization of features influenced cognitive processing so that central features were more quickly confirmed as typical of workplace criers compared to peripheral features. In contrast, peripheral features were more quickly disconfirmed, highlighting that employees' implicit cognitive associations largely matched the graded categorization of features established through Study 2's prototypicality ratings.

As predicted, higher feature frequencies and prototypicality were associated with greater precedence. Although this suggests that frequently recalled features of workplace criers are generally perceived as more representative and are more rapidly acknowledged, one should also be judicious when drawing conclusions based on precedence. This is because our operationalization of precedence as shorter response latencies assumed that (i) these latencies were directly related to employees' speed of spontaneous attribution even in the absence of prompts, and (ii) a feature with a shorter latency may override one with a longer latency. That is, if one responded faster to the trial with "Emotional" than to the one with "Authentic", it is presumed that upon witnessing a crying episode at work, one will quickly attribute emotionality to the crier; an attribution of authenticity, however, would surface later or not at all. Despite this, the correlational findings suggest that even in a real scenario without prompts, employees will instinctively ascribe the most accessible, category-relevant features (e.g., "Stressed", "Emotional", "Sensitive") before others. How many features they eventually ascribe in a given instance, though, is likely influenced by a host of contextual factors such as the intensity, location, and duration of crying.

## **General Discussion**

Collectively, findings from our three studies addressed the two overarching questions of this research, while validating a prototype organization for lay conceptions of workplace criers. We now discuss how these findings contribute to the existing literature on workplace crying, as well to the broader literature.

### **Contributions to Literature**

The current research contributes to the literature on workplace crying in several ways. First, the findings illustrate that observers' freely generated features of workplace criers are not only wide-ranging but also do not completely align with those selected by researchers for empirical study. When centering on features such as competence and emotionality, the assumption is that these features are salient and central to observers. Our findings with lay observers support this to a certain extent. The feature of competence, which has arguably received the closest attention from researchers studying workplace crying, was neither listed frequently nor judged as highly characteristic of workplace criers. We did notice that within this feature, linguistic units seemed to map onto only two traits within the competence dimension, i.e., competence and efficiency. This does not mean that competence is an unimportant feature that is undeserving of scholarly inquiry. Rather, it suggests that when forming an assessment of a workplace crier, observers may likely ascribe other features before competence. Such a postulation is also consistent with recent work highlighting that emotional tears may not always influence competence perceptions, but only under specific contexts (Wróbel et al., 2022).

Prudence should therefore be exercised when selecting and assessing features of workplace criers. This entails a departure from the disproportionate focus on competence, while still acknowledging its relevance to workplace criers. The most prototypical features that emerged in our findings (i.e., being stressed, overwhelmed, emotional, sensitive, and anxious) offer a possible starting point for researchers by clarifying how observers ostensibly focus on the emotional and psychological fortitude of workplace criers as opposed to their job capabilities.

Additionally, our findings validated the non-equivalence of features by demonstrating how they are prototypically organized through graded categorization. Prior work has theorized that certain features are more primary than others, and form earlier (Cuddy et al., 2008). For this non-equivalence of features to hold, we surmised that features would need to fundamentally characterize workplace criers to differing extents, as this indicates their respective salience to observers. The current findings supported our hypothesis, thereby providing a possible explanation for observers' proclivity to assign certain features before others. When witnessing a crying episode at work, observers may more readily assign highly prototypical features to the crier because they regard such features as better descriptors of workplace criers. This was

shown by observers being quicker to confirm central features and disconfirm peripheral features as typical of workplace criers, which heightens the explanatory strength of graded categorization in understanding the non-equivalence of features.

### **Practical Implications**

There are several practical implications of the current research. First, the findings advance knowledge in the emerging field of workplace crying, by providing a comprehensive mapping of crier features that offers accuracy and practical utility to researchers. This mapping consistently validated a prototype structure, where features that were frequently mentioned (Study 1) were also judged as more representative (Study 2) and were rapidly associated with workplace criers (Study 3). With this, scholars can obtain an informed overview of observers' most salient and central ideas surrounding the person-centered characteristics of workplace criers (e.g., being stressed, emotional, anxious) and conveniently compare these with existing theoretical conceptions of the interpersonal effects of workplace crying.

One may argue that discrepancies between observers' ascribed features and researchers' pre-selected features arose because, in past research, features were mostly assessed after providing rich contextual information, whereas the present findings with workplace criers were decontextualized. The free listing task in Study 1 offers some insight into this issue – specifically, employees were given full freedom to describe their impressions of workplace criers without a time limit.

While it is not possible to ascertain the exact image of workplace criers that employees envisioned as they responded, it is highly plausible that their listed features were context-laden by default. People's impressions of others are shaped by their diverse experiences, which comprise their schemas, attitudes, and expectations; further, different people can form varied impressions of the same behaviour (Jhangiani & Tarry, 2014). Thus, the crier features generated should not in themselves be deemed context-free, even though employees were not presented with contextual information. Rather, they can be regarded as an accumulated set of lay conceptions that reflects an amalgamation of contexts and real-world experiences. As previously mentioned, when accessing abstract representations of a concept, laypersons may draw from two storehouses of knowledge: one that is more generic and culturally shared, and another that is grounded in personal experiences (Fehr, 2005).

In this manner, the prototype structure of features enables researchers to align their efforts toward theoretically supported crier features that have received less attention but meaningfully reflect the perspectives of everyday people. When confronted with contrasting perspectives of workplace criers (e.g., whether they are sincere or manipulative), lay conceptions may serve as a “metric for comparing different views” (Fehr, 2005, p. 189). As evident from our findings, some features aligned with the dominant traits and dimensions assessed in literature. However,

other features did not align (e.g., timid, unfocused, unmotivated). We reiterate that these features, while not necessarily at the top of mind, could have naturally emerged as observers deliberated on their impressions of workplace criers and accessed firsthand experiences or even specific instances recounted by others. Fehr (2005) reiterates that prototype analyses enable the identification of existing theories that best align with lay conceptions; however, this does not mean that scholars' theories must match these lay conceptions. Thus, while lay conceptions can provide a useful starting point for theory development or help scholars determine which theory best reflects how everyday people perceive a workplace crier, a prototype analysis remains "a descriptive, not a prescriptive, analysis" (Fehr, 2005, p. 186).

Furthermore, the prototype structure of features provides novel, reliable options for dependent measures in future investigations of workplace crying, while ensuring these measures are representative of employee sentiments. We found that being stressed emerged as the feature of greatest importance, with employees mentioning it most frequently, evaluating it as most representative of workplace criers, and confirming this representativeness most readily. Daily work stress is one antecedent of workplace crying (Elsbach & Bechky, 2018), which suggests that the feature "Stressed" may connote a transient, state-based form of stress. However, it could also imply a more enduring, trait-like form of stress, where the crier is easily stressed by nature. If it is the former, would observers lend a helping hand? If it is the latter, would observers want to work with the crier or be willing to recommend the crier for future jobs? What we now know is that the idea of a workplace crier being stressed is very central and instinctive to observers – and this in itself should be considered in future studies on features of workplace criers.

Other central features identified in the current work can also be incorporated into subsequent investigations. For example, being empathetic has been discussed as a feature of workplace criers (e.g., Brazel et al., 2021; Davenport & Hall, 2011). On the other hand, being trusting and pessimistic have received more limited theoretical consideration, but their centrality to workplace criers suggests their relevance and utility when assessing lay conceptions. Future studies incorporating such features for evaluation should similarly consider the antecedents of workplace crying and how these elicit various internal states. To illustrate, crying sometimes occurs in employees in front-facing medical roles who witness others' suffering (Janssens et al., 2019). In examining whether and how observers evaluate such individuals as empathetic, it would be constructive to account for possible internal state(s) that precede the crying, e.g., if it was triggered by cognitive or affective empathy. By examining various aspects of a crier's prior internal state, researchers can also examine their interactions with person-level characteristics (e.g., gender, organizational role) to predict observers' evaluations and subsequent downstream behaviours, which may provide more nuanced insights. Together, the prototype structure of crier features thus prompts a critique and refocusing of existing

dependent measures in the study of workplace crying, while also offering a rich framework for systematic and cumulative knowledge advancement.

Finally, the current findings have practical implications for organizations. Should a crying episode arise at work, support and encouragement from co-workers and supervisors can provide significant benefits for criers. Aside from being stressed, we found that workplace criers were regarded as typically vulnerable and in need of assistance. This is aligned with the affiliative function of crying, which facilitates helping behavior from observers (Vingerhoets, 2013; Vingerhoets & Bylsma, 2015; Vingerhoets et al., 2016; Zickfeld et al., 2021). The distress caused by crying at work may therefore be alleviated through timely encouragement and comfort from co-workers, which may also strengthen team bonding and camaraderie.

### **Limitations and Suggestions for Future Research**

The current research is not without its limitations. Across all studies, more than half of the participants were female. This may limit the generalizability of the findings, as the features generated and evaluated may be skewed toward the views of Singaporean female employees. It is especially important to ensure a balanced sample in terms of participant gender, because men and women can judge the act of crying very differently. For example, a study by Cretser and colleagues (1982) demonstrated that men judged male criers particularly harshly, while women were less inclined to rely on the crier's gender when judging emotional appropriateness.

Although disproportionately more female employees participated in this research, exploratory analyses assessing gender differences yielded surprisingly similar patterns of results for males and females in each study (see Supplementary Note S4). Elsbach and Bechky (2018) posit that effects of observer gender might not emerge if observers rely on similar, prevalent scripts to evaluate crying in a workplace context. While plausible, it is worth noting that their investigation was limited to evaluations of female workplace criers only. One can therefore expect potential effects of observer gender to surface, particularly if more information on the criers is available to them (e.g., gender, job role, general behavioral tendencies at work). Consequently, future research should attempt to recruit more gender-balanced samples to examine their potentially divergent effects on workplace criers, while combining extensively researched crier variables, such as gender, with other less-studied variables such as race and age (MacArthur & Shields, 2019).

Another avenue for further exploration would be to examine how specific the features ascribed to workplace criers are compared to criers in general. At the outset, we suggested that workplace criers might be included in a broader, more generalized category of criers that allows for a more abstract representation. Findings lent some support to this by elucidating how workplace criers may similarly be ascribed features relating to helplessness and emotionality. However, it is also possible that a prototype analysis of criers in general, which is a broader and more abstract concept,

may yield other basic, “universal” features that complement those from existing theoretical accounts.

Finally, we should point out that the prototype structure of workplace criers may exhibit some variability across balanced cross-cultural samples. Cultural interpretations of facial expressions, originally considered universal (Ekman, 1971; Izard, 1971), have since shown variation in aspects such as perceived intensity (Yrizzary et al., 1998) and whether emotions are construed as individual feelings or as feelings inextricably linked to others (Masuda et al., 2008). For example, Americans tend to regard emotion as an internal, individual experience, while the Japanese tend to regard emotion as arising from the interplay between an individual and their social environment (Uchida et al., 2009). If the intensity and origin of crying is perceived differently by employees from different cultures, the most defining features of criers could also vary correspondingly. For instance, crying that is viewed as more intense in one culture may lead to more attributions of features related to distress and temperament (e.g., emotional, sensitive, stressed), compared to another culture where crying is perceived as less intense. The present research provides an initial glimpse into the prototypical workplace crier as conceptualized by employees in Singapore, though whether this structure holds across cultures warrants further exploration.

Participants’ employment in various industries could also have introduced cultural variations in responses. Organizational cultures are diverse in their shared norms and behaviours (Cheng & Groysberg, 2020), with display rules serving as instrumental guidelines for appropriate emotional expressions at work. Hence, crying may be regarded as less of a norm violation in organizations dedicated to providing care to beneficiaries (e.g., social services, healthcare), where displays of empathy are synonymous with competence. For example, close to half of Dutch respondents in a survey reported that physicians who cried were good physicians because of their perceived empathy (Omroep Max, 2015, as cited in Janssens et al., 2019). However, this same behavior might be interpreted as weakness in organizations that do not equate empathetic demonstrations with job success. Subsequent research would thus benefit from exploring whether employment in specific industries influences conceptions of intense emotional expressions like crying, and from clarifying the underlying mechanisms that motivate such differences.

## **Conclusion**

In conclusion, crying remains a frequent and highly intense emotional behavior in the workplace, and its interpersonal repercussions have continued to fascinate scholars in recent years. The prototype structure of lay conceptions offers an initial but comprehensive overview of the features that employees attribute to workplace criers in general, and serves as a springboard for scholars to develop more rigorous investigations that blend theoretical knowledge with data-driven insights. Ultimately,

it is hoped that the study of workplace crying will continue to grow substantively, even as we strive to understand how intense displays of emotion at work may profoundly influence interpersonal and organizational outcomes for the everyday employee.

**Author Contributions Statement.** **Terri Tan Su-May:** Conceptualization, Methodology, Materials, Data collection, Analysis, Writing for all drafts. **Kenichi Ito:** Conceptualization, Methodology, Review for all drafts.

**Ethics Statement.** Ethics approval was granted by the institutional review board at Nanyang Technological University (IRB-2019-09-033). All participants provided informed consent to participate in the studies and to the publication of their anonymized data.

**Data Availability Statement.** All data and materials are available at <https://doi.org/10.17605/OSF.IO/84AE2>. Supplemental material is also available on the journal's website (<https://pt.ffri.hr/pt/issue/view/52>).

## References

- Back, M. D., Schmukle, S. C., Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism–popularity link at zero acquaintance. *Journal of Personality and Social Psychology, 98*, 132–145. <https://doi.org/10.1037/a0016338>
- Becker, W., Conroy, S., Djurdjevic, E., & Gross, M. (2018). Crying is in the eyes of the beholder: An attribution theory framework of crying at work. *Emotion Review, 10*, 125–137. <https://doi.org/10.1177/1754073917706766>
- Birnie-Porter, C., & Lydon, J. E. (2013). A prototype approach to understanding sexual intimacy through its relationship to intimacy. *Personal Relationships, 20*, 236–258. <https://doi.org/10.1111/j.1475-6811.2012.01402.x>
- Bolden-Barrett, V. (2019, August 16). *Most people have cried at work at least once, survey says*. HR Dive. <https://www.hrdiver.com/news/most-people-have-cried-at-work-at-least-once-survey-says/560940/>
- Bouskila-Yam, O., & Kluger, A. N. (2011). Strength-based performance appraisal and goal setting. *Human Resource Management Review, 21*, 137–147. <http://dx.doi.org/10.1016/j.hrmr.2010.09.001>
- Brazel, D., Witowska, J., Wesolowski, M., & Anderson, E. E. (2021). Crying with a patient: A pilot study of the attitudes of physicians and physicians-in-training. *Narrative Inquiry in Bioethics, 11*(2), 195–210. <https://dx.doi.org/10.1353/nib.2021.0071>
- Cheng, J. Y.-J., & Groysberg, B. (2020, January 8). *How corporate cultures differ around the world*. Harvard Business Review. <https://hbr.org/2020/01/how-corporate-cultures-differ-around-the-world>

- Cretser, G. A., Lombardo, W. K., Lombardo, B., & Mathis, S. (1982). Reactions to men and women who cry: A study of sex differences in perceived societal attitudes versus personal attitudes. *Perceptual and Motor Skills*, *55*, 479–486.  
<https://doi.org/10.2466/pms.1982.55.2.479>
- Cuddy, A. J., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. *Advances in Experimental Social Psychology*, *40*, 61–149.  
[https://doi.org/10.1016/S0065-2601\(07\)00002-0](https://doi.org/10.1016/S0065-2601(07)00002-0)
- Davenport, L. A., & Hall, J. M. (2011). To cry or not to cry: Analysing the dimensions of professional vulnerability. *Journal of Holistic Nursing*, *29*, 180–188.  
<https://doi.org/10.1177/0898010110393356>
- De Clercq, A., Crombez, G., Buysse, A., & Roeyers, H. (2003). A simple and sensitive method to measure timing accuracy. *Behaviour Research Methods, Instruments, & Computers*, *35*, 109–115. <https://doi.org/10.3758/BF03195502>
- Ekman, P. (1971). Universal and cultural differences in facial expressions of emotions. In J. K. Cole (Ed.), *Nebraska symposium on motivation* (pp. 207–283). University of Nebraska Press.
- Elsbach, K. D., & Bechky, B. A. (2018). How observers assess women who cry in professional work contexts. *Academy of Management Discoveries*, *4*, 127–154.  
<https://doi.org/10.5465/amd.2016.0025>
- Elshout, M., Nelissen, R. M., & van Beest, I. (2017). Conceptualising humiliation. *Cognition and Emotion*, *31*, 1581–1594. <https://doi.org/10.1080/02699931.2016.1249462>
- Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology*, *55*, 557–579. <https://doi.org/10.1037/0022-3514.55.4.557>
- Fehr, B. (2004). Intimacy expectations in same-sex friendships: A prototype interaction-pattern model. *Journal of Personality and Social Psychology*, *86*, 265–284.  
<https://doi.org/10.1037/0022-3514.86.2.265>
- Fehr, B. (2005). The role of prototypes in interpersonal cognition. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 180–205). Guilford Press.
- Fehr, B., & Russell, J. A. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General*, *113*, 464–486.  
<https://doi.org/10.1037/0096-3445.113.3.464>
- Fehr, B., & Russell, J. A. (1991). The concept of love viewed from a prototype perspective. *Journal of Personality and Social Psychology*, *60*, 425–438.  
<https://doi.org/10.1037/0022-3514.60.3.425>
- Fehr, B., & Sprecher, S. (2009). Prototype analysis of the concept of compassionate love. *Personal Relationships*, *16*, 343–364.  
<https://doi.org/10.1111/j.1475-6811.2009.01227.x>

- Fischer, A. H., Eagly, A. H., & Oosterwijk, S. (2013). The meaning of tears: Which sex seems emotional depends on the social context. *European Journal of Social Psychology*, *43*, 505–515. <https://doi.org/10.1002/ejsp.1974>
- Fiske, S. T. (2018). Stereotype content: Warmth and competence endure. *Current Directions in Psychological Science*, *27*(2), 67–73. <https://doi.org/10.1177/096372141773882>
- Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, *11*, 77–83. <https://doi.org/10.1016/j.tics.2006.11.005>
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, *82*(6), 878–902. <https://doi.org/10.1037/0022-3514.82.6.878>
- Friesen, M. D., & Fletcher, G. J. (2007). Exploring the lay representation of forgiveness: Convergent and discriminant validity. *Personal Relationships*, *14*, 209–223. <https://doi.org/10.1111/j.1475-6811.2007.00151.x>
- Gazal, B., Duncan, S., Jarden, A., & Hinckson, E. (2019). A prototype analysis of New Zealand adolescents' conceptualizations of wellbeing. *International Journal of Wellbeing*, *9*, 1–25. <https://doi.org/10.5502/ijw.v9i4.975>
- Giattino, C., Ortiz-Ospina, & Roser, M. (2013). *Working hours*. Our world in data. <https://ourworldindata.org/working-hours>
- Gieseler, K., Inzlicht, M., & Friese, M. (2020). Do people avoid mental effort after facing a highly demanding task?. *Journal of Experimental Social Psychology*, *90*, 1–9. <https://doi.org/10.1016/j.jesp.2020.104008>
- Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, *5*, 95–110. <https://doi.org/10.1037/1076-8998.5.1.95>
- Gregg, A. P., Hart, C. M., Sedikides, C., & Kumashiro, M. (2008). Everyday conceptions of modesty: A prototype analysis. *Personality and Social Psychology Bulletin*, *34*, 978–992. <https://doi.org/10.1177/0146167208316734>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3 ed.). Sage.
- Harasymchuk, C., & Fehr, B. (2012). A prototype analysis of relational boredom. *Journal of Social and Personal Relationships*, *30*, 627–646. <https://doi.org/10.1177/0265407512464483>
- Hendriks, M. C., Croon, M. A., & Vingerhoets, A. J. (2008). Social reactions to adult crying: The help-soliciting function of tears. *The Journal of Social Psychology*, *148*(1), 22–42. <https://doi.org/10.3200/SOCP.148.1.22-42>
- Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey's end: Lay conceptions of nostalgia reflect its original homeric meaning. *Emotion*, *12*, 102–119. <https://doi.org/10.1037/a0025167>

- Horowitz, L. M., French, R. D., & Anderson, C. A. (1982). The prototype of a lonely person. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 183–205). Wiley.
- Izard, C. E. (1971). *The face of emotion*. Appleton-Century-Crofts.
- Janssens, K. M., Sweerts, C., & Vingerhoets, A. J. (2019). The physician's tears: Experiences and attitudes of crying among physicians and medical interns. *Journal of Clinical Psychology in Medical Settings*, *26*, 411–420. <https://doi.org/10.1007/s10880-019-09611-9>
- Jarden, R. J., Sandham, M., Siegert, R. J., & Koziol-McLain, J. (2018). Intensive care nurse conceptions of well-being: A prototype analysis. *Nursing in Critical Care*, *23*, 324–331. <https://doi.org/10.1111/nicc.12379>
- Jhangiani, R., & Tarry, H. (2014). *Principles of Social Psychology – 1st International Edition*. B.C. Open Textbook Collection.
- Kearns, J. N., & Fincham, F. D. (2004). A prototype analysis of forgiveness. *Personality and Social Psychology Bulletin*, *30*, 838–855. <https://doi.org/10.1177/0146167204264237>
- Kinsella, E. L., Ritchie, T. D., & Igou, E. R. (2015). Zeroing in on heroes: A prototype analysis of hero features. *Journal of Personality and Social Psychology*, *108*, 114–127. <https://doi.org/10.1037/a0038463>
- Kito, M. (2016). Shared and unique prototype features of relationship quality concepts. *Personal Relationships*, *23*, 759–786. <https://doi.org/10.1111/pere.12156>
- Knowles, E. D., Lowery, B. S., Schaumberg, R. L. (2010). Racial prejudice predicts opposition to Obama and his health care reform plan. *Journal of Experimental Social Psychology*, *46*, 420–423. <https://doi.org/10.1016/j.jesp.2009.10.011>
- Lambert, N. M., Graham, S. M., & Fincham, F. D. (2009). A prototype analysis of gratitude: Varieties of gratitude experiences. *Personality and Social Psychology Bulletin*, *35*, 1193–1207. <https://doi.org/10.1177/0146167209338071>
- Lambert, N. M., Fincham, F. D., & Graham, S. M. (2011). Understanding the layperson's perception of prayer: A prototype analysis of prayer. *Psychology of Religion and Spirituality*, *3*, 55–65. <https://doi.org/10.1037/a0021596>
- Le, B., Loving, T. J., Lewandowski Jr, G. W., Feinberg, E. G., Johnson, K. C., Fiorentino, R., & Ing, J. (2008). Missing a romantic partner: A prototype analysis. *Personal Relationships*, *15*, 511–532. <https://doi.org/10.1111/j.1475-6811.2008.00213.x>
- Lim, A. C. (2012). *Exploring negative relationships at work: A prototype analysis* [Unpublished doctoral dissertation]. National University of Singapore.
- MacArthur, H. J., & Shields, S. A. (2019). How you cry, when you cry, why you cry, and who you are: Responses to adult crying in social contexts. In U. Hess & S. Hareli (Eds.), *The social nature of emotion expression* (pp. 209–225). Springer Nature. [https://link.springer.com/chapter/10.1007%2F978-3-030-32968-6\\_12](https://link.springer.com/chapter/10.1007%2F978-3-030-32968-6_12)

- Masuda, T., Ellsworth, P. C., Mesquita, B., Leu, J., Tanida, S., & Van de Veerdonk, E. (2008). Placing the face in context: Cultural differences in the perception of facial emotion. *Journal of Personality and Social Psychology, 94*(3), 365–381. <https://doi.org/10.1037/0022-3514.94.3.365>
- May, R. W., & Fincham, F. D. (2018). Deity representation: A prototype approach. *Archive for the Psychology of Religion, 40*, 258–286. <https://doi.org/10.1163/15736121-12341361>
- Mazur, L. B., & Vollhardt, J. R. (2015). The prototypicality of genocide: Implications for international intervention. *Analyses of Social Issues and Public Policy, 16*, 290–320. <https://doi.org/10.1111/asap.12099>
- Miceli, M., & Castelfranchi, C. (2003). Crying: Discussing its basic reasons and uses. *New Ideas in Psychology, 21*(3), 247–273. <https://doi.org/10.1016/j.newideapsych.2003.09.001>
- Morgan, B., Gulliford, L., & Kristjánsson, K. (2014). Gratitude in the UK: A new prototype analysis and a cross-cultural comparison. *The Journal of Positive Psychology, 9*, 281–294. <https://doi.org/10.1080/17439760.2014.898321>
- Motro, D., & Ellis, A. P. J. (2017). Boys, don't cry: Gender and reactions to negative performance feedback. *Journal of Applied Psychology, 102*, 227–235. <https://doi.org/10.1037/apl0000175>
- Neto, F., & Mullet, E. (2014). A prototype analysis of the Portuguese concept of saudade. *Journal of Cross-Cultural Psychology, 45*, 660–670. <https://doi.org/10.1177/0022022113518370>
- Picchi, A. (2019, August 15). *Crying on the job? You're not alone, with 8 in 10 workers shedding tears*. CBS News. <https://www.cbsnews.com/news/crying-on-the-job-youre-not-alone-with-8-in-10-workers-shedding-tears/>
- Picó, A., Gračanin, A., Gadea, M., Boeren, A., Aliño, M., & Vingerhoets, A. (2020). How visible tears affect observers' judgements and behavioural intentions: Sincerity, remorse, and punishment. *Journal of Nonverbal Behaviour, 44*, 215–232. <https://doi.org/10.1007/s10919-019-00328-9>
- Pittarello, A., & Motro, D. (2024). Women who cry to manipulate others face more backlash than men. *Journal of Behavioral Decision Making, 37*(2), Article e2374. <https://doi.org/10.1002/bdm.2374>
- Rosch, E. H. (1973). Natural categories. *Cognitive Psychology, 4*, 328–350. [https://doi.org/10.1016/0010-0285\(73\)90017-0](https://doi.org/10.1016/0010-0285(73)90017-0)
- Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General, 104*, 192–233. <https://doi.org/10.1037/0096-3445.104.3.192>
- Rosch, E., & Mervis, C. B. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology, 7*, 573–605. [https://doi.org/10.1016/0010-0285\(75\)90024-9](https://doi.org/10.1016/0010-0285(75)90024-9)

- Rosch, E., Mervis, C. B., Gray, W. D., Johnson, D. M., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive Psychology*, 8(3), 382–439. [https://doi.org/10.1016/0010-0285\(76\)90013-X](https://doi.org/10.1016/0010-0285(76)90013-X)
- Rosenberg, S., & Jones, R. (1972). A method for investigating and representing a person's implicit theory of personality: Theodore Drieser's view of people. *Journal of Personality and Social Psychology*, 22, 372–386. <https://doi.org/10.1037/h0032891>
- Seuntjens, T. G., Zeelenberg, M., Breugelmans, S. M., & Van de Ven, N. (2014). Defining greed. *British Journal of Psychology*, 106, 505–525. <https://doi.org/10.1111/bjop.12100>
- Soares, A. (2003). Tears at work: Gender, interaction, and emotional labour. *Just labour*, 2, 36–44. <https://doi.org/10.25071/1705-1436.174>
- Sorensen, S., Jarden, A., & Schofield, G. (2016). Lay perceptions of mental toughness: Understanding conceptual similarities and differences between lay and sporting contexts. *International Journal of Wellbeing*, 6, 71–95. <https://doi.org/10.5502/ijw.v6i3.551>
- Tiedens, L. Z. (2001). Anger and advancement versus sadness and subjugation: The effect of negative emotion expressions on social status conferral. *Journal of Personality and Social Psychology*, 80, 86–94. <https://doi.org/10.1037/0022-3514.80.1.86>
- Uchida, Y., Townsend, S. S. M., Rose Markus, H., & Bergsieker, H. B. (2009). Emotions as within or between people? Cultural variation in lay theories of emotion expression and inference. *Personality and Social Psychology Bulletin*, 35, 1427–1439. <https://doi.org/10.1177/0146167209347322>
- van de Ven, N., Meijs, M. H., & Vingerhoets, A. (2017). What emotional tears convey: Tearful individuals are seen as warmer, but also as less competent. *British Journal of Social Psychology*, 56, 146–160. <https://doi.org/10.1111/bjso.12162>
- Van den Brand, S. J. (2018). *Crying at work, cause and consequence: Helplessness, Supervisor support, Stress* [Unpublished Master's thesis]. Tilburg University.
- Van Kleef, G., De Dreu, C., & Manstead, A. (2010). An interpersonal approach to emotion in social decision making: The emotions as social information (EASI) model. *Advances in Experimental Social Psychology*, 42, 45–96. [https://doi.org/10.1016/S0065-2601\(10\)42002-X](https://doi.org/10.1016/S0065-2601(10)42002-X)
- Vingerhoets, A. (2013). *Why only humans weep: Unravelling the mysteries of tears*. Oxford University Press.
- Vingerhoets, A. J., & Bylsma, L. M. (2015). The riddle of human emotional crying: A challenge for emotion researchers. *Emotion Review*, 8, 207–217. <https://doi.org/10.1177/1754073915586226>
- Vingerhoets, A. J., van de Ven, N., & van der Velden, Y. (2016). The social impact of emotional tears. *Motivation and Emotion*, 40, 455–463. <https://doi.org/10.1007/s11031-016-9543-0>
- Weiser, D. A., Lalasz, C. B., Weigel, D. J., & Evans, W. P. (2014). A prototype analysis of infidelity. *Personal Relationships*, 21, 655–675. <https://doi.org/10.1111/pere.12056>

- Wolf, E. B., Lee, J. J., Sah, S., & Brooks, A. W. (2016). Managing perceptions of distress at work: Reframing emotion as passion. *Organisational Behaviour and Human Decision Processes*, 137, 1–12. <https://doi.org/10.1016/j.obhdp.2016.07.003>
- Wróbel, M., Wągrowka, J., Zickfeld, J. H., & van de Ven, N. (2022). Tears do not influence competence in general, but only under specific circumstances: A systematic investigation across 41 countries. *Emotion*, 22(2), 292–304. <https://doi.org/10.1037/emo0001010>
- Yrizarry, N., Matsumoto, D., & Wilson-Cohn, C. (1998). American-Japanese differences in multiscale intensity ratings of universal facial expressions of emotion. *Motivation and Emotion*, 22, 315–327. <https://doi.org/10.1023/A:1021304407227>
- Zebb, B. J., & Beck, J. G. (1998). Worry versus anxiety: Is there really a difference? *Behavior Modification*, 22(1), 45–61. <https://doi.org/10.1177/01454455980221003>
- Zickfeld, J. H., van de Ven, N., Pich, O., Schubert, T. W., Berkessel, J. B., Pizarro, J. J., Bhushan, B., Mateo, N. J., Barbosa, S., Sharman, L., Kökönyei, G., Schrover, E., Kardum, I., Aruta, J. J. B., Lazarevic, L. B., Escobar, M. J., Stadel, M., Arriaga, P., Dodaj, A. ... Vingerhoets, A. (2021). Tears evoke the intention to offer social support: A systematic investigation of the interpersonal effects of emotional crying across 41 countries. *Journal of Experimental Social Psychology*, 95, Article 104137. <https://doi.org/10.1016/j.jesp.2021.104137>

Received: September 17, 2025



International License / Međunarodna licenca  
Attribution – ShareAlike / Imenovanje – Dijeli pod istim uvjetima