RESEARCH REPORT

Is Perfect Good? A Meta-Analysis of Perfectionism in the Workplace

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Although the concept of perfectionism is familiar to most people, its relationships with organizationally relevant variables remain unclear because of the dispersed and multidisciplinary nature of extant research. The state of the literature is particularly concerning given the likely widespread influence perfectionism has on individuals' workplace attitudes and behaviors. Moreover, research in multiple disciplines of psychology has revealed the phenomenon of perfectionism to be multidimensional. In addition, the totality of effects surrounding perfectionism remains unclear as perfectionism carries both benefits as well as consequences for employees and organizations. To cogently synthesize and empirically disentangle the possible differential effects associated with perfectionism at work, the authors conducted a meta-analysis of perfectionism and work-related antecedents and outcomes. The resulting qualitative and quantitative review reveals perfectionism to have sizable and consistent relationships with several organizationally relevant factors but an equivocal overall relationship with job performance. The authors provide a theoretical and empirical overview of the state of the literature and suggest avenues for future research that may facilitate better integration of perfectionism into organizational research.

Keywords: perfectionism, meta-analysis, employee outcomes

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Perfectionism, characterized as striving for flawlessness, setting excessively high standards for performance, and evaluating one's own behavior overly critically (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990), is not a new concept to researchers. Scholars in a variety of psychology disciplines have explored the role of perfectionism across a host of job-related constructs, yet the full effects of perfectionism at work remain largely unclear (Ozbilir, Day, & Catano, 2015). On one hand, individuals higher in perfectionism are expected to be more exacting when completing tasks (Flett & Hewitt, 2002; Frost et al., 1990). On the other hand,

tendencies to persistently refine and criticize one's own work likely produce substantial demands and pressures, negatively impacting one's well-being (Flaxman, Ménard, Bond, & Kinman, 2012). This duality is encapsulated succinctly in the selection interview when candidates are asked about their biggest weakness and most commonly respond, "I am a perfectionist" (Taube, 2015). Candidates strategically provide this answer over other, more authentic responses because of the commonly held assumption that the positive aspects of perfectionism outweigh, or at least balance out, the negative impacts at work (Bariso, 2015). Thus, conceptual and empirical consensus is needed to delineate the possible paradoxical impact of perfectionism at work.

In this study, we first critically review the current conceptualization of perfectionism and its dimensionality. Second, we meta-analyze prior empirical studies of perfectionism and organizationally relevant factors. In doing so, we aggregate and contextualize extant research and identify what is known and what remains unknown about perfectionism in the workplace. Finally, we elucidate the differential and divergent effects of perfectionism and its dimensions to show the possible beneficial and harmful influences at work. By highlighting both dimensions of perfectionism throughout, we demonstrate their theoretical and empirical importance for understanding the overarching role of employee perfectionism on work-related variables. Overall, by synthesizing extant

research on perfectionism, a colloquially known yet somewhat overlooked variable in organizational psychology, we set the stage for future research on employee perfectionism at the workplace.

Conceptualizing Perfectionism

Perfectionism is most markedly defined by a desire for absolute flawlessness (Frost et al., 1990). Individuals high on perfectionism tend to be inflexible and rigid about their desired level of performance and hold a commensurate binary, all-or-nothing judgment of their performance (Egan, Piek, Dyck, & Rees, 2007; Stoeber & Otto, 2006). Falling short of these standards, regardless of how close, is seen as a total failure (Hewitt, Flett, & Mikail, 2017). Not only are these performance standards high and judged overly harshly, but they are pursued compulsively, even if the situation does not require perfection (Flett & Hewitt, 2006; Sherry, Hewitt, Sherry, Flett, & Graham, 2010). Critically, even when standards are met, individuals high in perfectionism are unlikely to experience satisfaction but rather relief and/or the compulsion to set even higher standards next time (Mor, Day, Flett, & Hewitt, 1995; Shafran, Cooper, & Fairburn, 2002). These perfectionistic tendencies are often driven by perceived threats to ones' self-worth, from either themselves or others, if standards are not met (Flett & Hewitt, 2002). As such, perfectionism has generally been conceptualized as a motivational trait (Hewitt et al., 2017) and, similar to other traits, it can be more or less salient depending on the situation (Beauregard, 2006; Dunkley, Zuroff, & Blankstein, 2003).

The workplace is a context where perfectionism is often reported to be the most salient (Slaney & Ashby, 1996; Stoeber & Stoeber, 2009), as it is a domain where task-specific performance episodes, performance assessments, and achievement-related indicators are ubiquitous (Dunn, Whelton, & Sharpe, 2006; Mitchelson & Burns, 1998). Yet the lack of clarity regarding the role of perfectionism at work partially stems from the construct itself, as the dimensionality and measurement of perfectionism, summarized in Table 1, have varied over time and between researchers (Ayearst, Flett, & Hewitt, 2012; Stoeber, 2017). Although early conceptualizations positioned perfectionism as a unidimensional construct (Burns, 1980), more recent and prominent measures of perfectionism, assessing various facets underlying the construct, routinely result in two higher-order dimensions (Enns, Cox, & Clara, 2002; Terry-Short, Owens, Slade, & Dewey, 1995). Researchers in clinical psychology frequently label these dimensions as "adaptive" and "maladaptive" perfectionism (Slaney, Rice, Mobley, Trippi, & Ashby, 2001), emphasizing their psychopathological implications (Enns & Cox, 2002). Existing literature supports the validity of these dimensions, but also warrants new labels that reflect the theoretical foundations of the dimensions rather than their correlates, a critical step toward integrating perfectionism into organizational research (Doty & Glick, 1994).

Facets of perfectionism that are traditionally captured under "adaptive" perfectionism (personal/high standards, organization, order, self-oriented, and other-oriented) are conceptually related in that they center around tendencies to compulsively focus on, and demand to achieve, excessively high standards (Dunkley, Blankstein, & Berg, 2012). As such, we use the term *excellence-seeking* when describing this dimension of perfectionism. Individuals that are high on excellence-seeking perfectionism impose on themselves standards of flawlessness and are unwilling to reduce these

self-imposed high standards even when doing a "good enough" job would suffice (Shafran et al., 2002; Sherry et al., 2010). If their standards are not met, then these individuals will reduce their own self-worth perceptions (Greenspon, 2000; Lundh, 2004). Conversely, upon achieving desired outcomes, they are expected to subsequently set even higher standards for future performance episodes rather than be self-satisfied (Flett & Hewitt, 2006).

Facets of perfectionism typically grouped under the term "maladaptive" perfectionism (concerns over mistakes, discrepancy, doubts about actions, socially prescribed, parental expectations, and parental concerns) share the conceptual core of an obsessive aversion to, and concern with the possibility of, failing to reach high performance standards (Enns & Cox, 2002; Terry-Short et al., 1995). Thus, we use the term *failure-avoiding* when describing this higher-order dimension of perfectionism. Individuals that are high on failure-avoiding perfectionism also perceive that perfection is expected of them by others (Hewitt & Flett, 1991). Relatedly, a key motivational force driving these individuals' excessive concerns about not meeting standards is the belief that others will view them as having lower worth if they do not achieve perfection (Bieling, Israeli, & Antony, 2004). Interestingly, these individuals are certain that not achieving flawlessness will result in deleterious consequences and portend future failures (Hewitt et al., 2017), while achieving flawlessness will provide momentary relief (Shafran et al., 2002).

Excellence-seeking and failure-avoiding perfectionism assess different dimensions of perfectionism, but they are also expected to positively relate to each other as they adhere to the overarching characteristics of perfectionism including all-or-nothing thinking, compulsively inflexible and lofty standards, and performance-contingent self-worth evaluations (Hewitt & Flett, 1993; Ozbilir et al., 2015). For example, one high in both dimensions simultaneously strives to achieve high, self-set standards and worries about others' negative evaluations of falling short, whereas one high only in excellence-seeking perfectionism experiences just the former (Hewitt & Flett, 1991). These dimensions function similarly to general approach-avoidance frameworks used in psychology (Flett & Hewitt, 2006), which are also somewhat contrasting yet positively related processes motivating individuals when performing tasks (Elliot & Church, 1997). Yet existing research has clearly distinguished the perfectionism dimensions from other constructs used in approach-avoidance frameworks (e.g., need for achievement, fear of failure, goal orientations; Eum & Rice, 2011; Onwuegbuzie, 2000; Stumpf & Parker, 2000).

The rationale for the expected relationships between work-relevant variables and perfectionism and its dimensions is presented next. Construct selection was driven by overarching themes in the extant perfectionism literature (specifically, the personality correlates of perfectionism, expected work effort, psychological work states, and mental well-being) and by the importance of understanding the perfectionism-job performance relationship to determine the overall impact of this phenomenon at work.

Perfectionism and Personality Correlates

Scholars studying perfectionism as a disposition often focus on the relationships between perfectionism and the five-factor model (FFM) of personality traits (Barrick, Mount, & Judge, 2001). Of the five factors, conscientiousness and emotional stability have

Table 1
Summary of Prior Conceptualizations and Measurements of Perfectionism With Mapping to Excellence-Seeking and Failure-Avoiding Dimensions

Name of scale	Authors	Conceptualization/ description	Facets	Conceptualization of facets	Sample items	Excellence-seeking/ failure-avoiding
Almost Perfect Scale Revised (APS-R)	Slaney, Rice, Mobley, Trippi, & Ashby, 2001	Captures the high standards set for oneself and for organization, neatness, and order, as well as a perception that one is always falling short of these excessively high standards.	Order	Desiring things to be neat and orderly	I like to always be organized and disciplined; Neatness is important to me.	Excellence-seeking
			High standards	Setting high performance goals and achievement levels for oneself	If you don't expect much out of yourself you will never succeed; I have a strong need to strive for excellence.	Excellence-seeking
			Discrepancy	Captures the distress caused by the discrepancy between standards set for oneself and perceived performance toward those standards	My best just never seems to be good enough; My performance rarely lives up to my standards; I hardly ever feel that what I've done is good enough.	Failure-avoiding
Multidimensional Perfectionism Scale (MPS)	Hewitt & Flett, 1990, 1991	Comprises both personal and social components; the primary difference among these dimensions is not the behavior per se, but the object to whom the perfectionistic behavior is directed (e.g., self-oriented vs. other-oriented) or to whom the perfectionistic behavior is attributed (e.g., socially prescribed perfectionism).	Self-oriented	Setting exacting standards for oneself, stringently evaluating and censuring one's own behavior, striving to attain perfection in one's endeavors and avoid failures	When I am working on something, I cannot relax until it is perfect; I must work to my full potential at all times; One of my goals is to be perfect in everything I do.	Excellence-seeking
			Other-oriented	Setting exacting standards for others; stringently evaluating others behavior; stringently evaluates others' performance	If I ask someone to do something, I expect it to be done flawlessly; I have high expectations for people who are important to me.	Excellence-seeking
			Socially prescribed	Belief or perception that significant others have unrealistic standards for them, evaluate them stringently, and exert pressure on them to be perfect	My family/people expect me to be perfect. The better I do, the better I am expected to do. Anything I do that is less than excellent will be seen as poor work by those around me.	Failure-avoiding

(table continues)

Table 1 (*continued*)

Name of scale	Authors	Conceptualization/ description	Facets	Conceptualization of facets	Sample items	Excellence-seeking/ failure-avoiding
Frost Multidimensional Perfectionism Scale (MPS-F)	Frost, Marten, Lahart, & Rosenblate, 1990	Defined perfectionism as the setting of excessively high standards for performance accompanied by overly critical self-evaluations. Four of the dimensions are directed towards the self (high personal standards, doubts about actions, concern over mistakes, and organization), and two dimensions are related to perceptions of perfectionism from one's parents (parental expectation and parental criticism).	Concerns over mistakes	An excessive concern about making mistakes	If I fail at work/school, I am a failure as a person; If I do not do well all the time, people will not respect me.	Failure-avoiding
			Organization	A preference for order and organization	Neatness is very important to me.	Excellence-seeking
			Parental criticism	The perception of high parental criticism	I never feel like I could meet my parents' standard; My parents never tried to understand my mistakes.	Failure-avoiding
			Parental expectations	The perception of high parental expectations	My parents set very high standards for me; Only outstanding performance is good enough in my family.	Failure-avoiding
			Personal standards	Having high personal standards	If I do not set the highest standards for myself, I am likely to end up a second-rate person; I set higher goals than most people.	Excellence-seeking
			Doubts about actions	The doubting of the quality of one's actions	I usually have doubts about the simple everyday things I do; Even when I do something very carefully, I often feel that it is not quite right.	Failure-avoiding

Table 2

Studies Included in the Meta-Analyses, Moderators, and Effect-Sizes With Overall Perfectionism

Reference	Sample number	N	Perfectionism scale used	Location	Publication status	Job type	Sample type	Dimensionality	Correlates	Effect size with perfectionism
Ahmetoglu, Harding, Akhtar, & Chamorro-Premuzic (2015)	1	210	MPS-F	0	0	0	0	ES	ENG	.04
Bartczak & Ogińska-Bulik (2012)	1	126	Other	0	1	1	1	P	A	.50
Beauregard (2012)	1	223	APS-R	0	1	1	1	ES, FA	D	.26
Black & Reynolds (2013)	1	126	MPS-F	1	1	0	0	ES, FA	PER	.22
Bousman (2008)	1	549	MPS	1	0	1	1	ES, FA	D	.30
									B	.19
									S	.22
Burke (2001)	1	491	Other	1	1	1	0	FA	H	.14
									S	.27
									W	.30
Camadan, Kahveci, & Yavas (2013)	1	243	Other	0	1	0	0	ES, FA	W	.15
Cha (2016)	1	257	MPS	0	1	0	0	P	D	.26
Chang (2000)	1	256	MPS	1	1	0	0	P	E	−.29
									EXT	.02
									S	.22
									W	.46
Chang (2012)	1	314	MPS	0	1	1	1	FA	B	.26
Childs & Stoeber (2012)	1	69	MPS	0	1	1	1	P	B	.15
									S	.25
Childs & Stoeber (2012)	2	195	MPS	0	1	1	1	P	B	.28
									S	.35
Childs & Stoeber (2010)	1	106	MPS	0	1	0	0	P	ENG	.16
									B	−.02
Chung & Deuling (Mitchelson) (2017)	1	250	APS-R	1	0	0	0	P	B	−.05
Clark, Lelchook, & Taylor (2010)	1	322	APS-R	1	1	0	0	ES, FA	C	.32
									E	.05
									W	.19
									EXT	.27
									AGR	.15
									OPEN	.22
Crane, Phillips, & Karin (2015)	1	503	MPS-F	0	1	1	1	P	A	.47
									E	−.44
									H	.11
									S	.51
Cuttler & Graf (2007)	1	141	MPS	1	1	0	0	P	C	.10
									E	−.28
Dahling & Thompson (2013)	1	139	Other	1	1	0	0	P	EXT	.09
									AGR	−.25
									OPEN	−.12
									E	−.13
Dunkley, Blankstein, & Berg (2012)	1	223	APS-R, MPS, MPS-F	1	1	0	0	ES, FA	A	.24
									C	.13
									D	.41
									E	−.33
									EXT	.16
									AGR	−.21
									OPEN	.03

(table continues)

Table 2 (*continued*)

Reference	Sample number	N	Perfectionism scale used	Location	Publication status	Job type	Sample type	Dimensionality	Correlates	Effect size with perfectionism
Dunkley, Ma, Lee, Preacher, & Zuroff (2014)	1	196	APS-R, MPS, MPS-F	1	1	0	0	P	E	−.36
									S	.25
									EXT	.07
Dunn, Whelton, & Sharpe (2006)	1	369	MPS, MPS-F	1	1	1	1	FA	A	.41
									D	.42
									ENG	−.20
Fairlie (2012)	1	278	MPS	1	0	0	0	P	B	.10
									D	.09
Flaxman, Ménard, Bond, & Kinman (2012)	1	77	MPS-F	0	1	1	1	P	A	.31
									B	.26
									H	.07
									W	.29
Flett, Besser, & Hewitt (2005)	1	210	MPS	0	1	0	0	P	D	.23
Flett, Hewitt, Blankstein, & Dynin (1994)	1	100	MPS	1	1	0	0	P	M	.43
Forrest, King, & Delfabbro (2016)	1	485	Other	0	1	0	0	P	A	.25
									D	.18
									S	.32
Gati et al. (2011)	1	190	MPS	0	1	0	0	P	A	.18
Guppy & Weatherstone (1997)	1	273	Other	0	1	1	1	P	D	.11
Hendricks (2007)	1	160	Other	1	0	1	0	P	A	.47
Hochwarter & Byrne (2010)	1	211	MPS	1	1	1	1	P	D	.19
									E	−.18
									EXT	.08
Howlett (1994)	1	133	Other	1	0	1	1	FA	A	−.23
									D	−.14
Hrabluik (2010)	1	235	MPS-F, Other	1	0	1	1	ES, FA	C	.09
									H	.15
									E	−.31
									M	.13
									PER	.26
Hrabluik (2010)	2	1,153	MPS-F, Other	1	0	1	1	ES, FA	B	.31
									C	.13
									E	−.38
									M	.25
				242					PER	−.01
Kaden (1999)	1	122	MPS	1	0	1	1	ES, FA	B	.01
									H	.28
Kanten & Yesiltas (2015)	1	146	Other	0	1	1	1	ES, FA	B	.10
									ENG	.27
Kenny, Davis, & Oates (2004)	1	29	MPS-F	0	1	1	1	P	A	.38
									S	−.03
Kobori, Yoshie, Kudo, & Ohtsuki (2011)	1	275	MPS	0	1	0	0	ES, FA	A	.23
									H	.15
									PER	.16
Kung & Chan (2014)	1	144	Other	0	1	1	1	ES, FA	ENG	−.05
									S	.19
Langan-Fox & Canty (2010)	1	441	Other	1	1	0	0	ES	D	.52
Li, Hou, Chi, Liu, & Hager (2014)	1	345	APS-R	0	1	1	1	ES, FA	B	.10
Locander, Weinberg, Mulki, & Locander (2015)	1	279	MPS-F	1	1	1	1	FA	PER	.00

Table 2 (*continued*)

Reference	Sample number	N	Perfectionism scale used	Location	Publication status	Job type	Sample type	Dimensionality	Correlates	Effect size with perfectionism
Lundh, Johnsson, Sundqvist, & Olsson (2002)	1	74	MPS-F	0	1	0	0	P	E	−.57
Mackinnon, Sherry, Antony, Stewart, Sherry, & Hartling (2012)	1	226	MPS, MPS-F, Other	1	1	0	0	FA	D	.48
									E	−.17
Mackinnon, Sherry, Antony, Stewart, Sherry, & Hartling (2012)	2	226	MPS, MPS-F, Other	1	1	0	0	FA	D	.25
									E	−.18
Mandel, Dunkley, & Moroz (2015)	1	150	APS-R, MPS, MPS-F, Other	1	1	0	0	FA	A	.41
									D	.58
									E	−.36
Matlon (2015)	1	82	MPS-F	1	0	1	0	ES, FA	B	.14
									S	.32
Mazzetti, Schaufeli, & Guglielmi (2014)	1	333	Other	0	1	1	0	ES	C	.38
									M	.11
									W	.21
Methikalam (2008)	1	170	MPS-F	1	0	0	0	FA	A	.52
									D	.55
Methikalam, Wang, Slaney, & Yeung (2015)	1	174	APS-R	1	1	0	0	ES, FA	A	.25
									D	−.06
Michelson & Burns (1998)	1	66	MPS, Other	1	1	0	0	ES, FA	B	.11
Michelson (2009)	1	278	APS-R	1	1	0	0	ES, FA	C	.31
									E	.01
									M	.26
									EXT	.19
									AGR	.19
									OPEN	.20
Moate, Gnilka, West, & Bruns (2016)	1	178	APS-R	1	1	1	0	ES, FA	B	.21
									S	.33
Molnar, Reker, Culp, Sadava, & DeCourville (2006)	1	492	MPS	1	1	0	0	P	E	−.14
									EXT	.23
Moore (1984)	1	341	Other	1	0	1	1	FA	B	.05
Mor, Day, Flett, & Hewitt (1995)	1	87	MPS	1	1	1	1	P	A	.09
									M	−.18
									PER	.03
Murphy (2005)	1	253	APS-R	1	0	0	0	ES, FA	A	.18
									S	.08
Nejad, Besharat, Haddadi, & Abdolmanafi (2011)	1	234	MPS	0	1	0	0	ES, FA	E	.00
									EXT	.18
Newhouse (2008)	1	288	Other	1	0	1	0	P	C	.42
									E	.06
									EXT	−.12
O'Connor, O'Connor, & Marshall (2007)	1	277	MPS	0	1	0	0	P	A	.21
									D	.16
									W	.24
O'Connor, O'Connor, & Marshall (2007)	2	224	MPS	0	1	0	0	P	A	.22
									D	.21
									W	.32
Ogus (2008)	1	313	MPS	1	0	1	1	P	B	.19
									S	.33

(*table continues*)

Table 2 (*continued*)

Reference	Sample number	N	Perfectionism scale used	Location	Publication status	Job type	Sample type	Dimensionality	Correlates	Effect size with perfectionism
Ogus (2008)	2	305	MPS	1	0	1	1	P	B S	.23 .36
Ogus (2008)	3	294	MPS	1	0	1	1	P	B S	.27 .43
Ozbilir, Day, & Catano (2015)	1	114	APS-R	0	1	0	0	ES, FA	B C M S ENG	.10 .11 .15 .12 .07
Ozbilir, Day, & Catano (2015)	2	155	APS-R	1	1	0	0	ES, FA	B C M S ENG	.07 .08 .25 .18 .11
Perez-Prada (1997)	1	332	Other	1	0	1	1	FA	S W	.34 .42
Powers, Koestner, Zuroff, Milyavskaya, Gorin (2011)	1	68	MPS	1	1	0	0	P	M	.09
Procopio, Holm-Denoma, Gordon, & Joiner (2006)	1	150	Other	1	1	0	1	P	A D	.15 .30
Proost, Derous, Schreurs, Hagtvet, & De Witte (2008)	1	271	MPS	0	1	0	0	P	A C	.13 .25
Purvis, Howell, & Iyer (2011)	1	1,858	Other	1	1	0	0	ES	E EXT AGR OPEN	.04 .16 .11 .29
Saboonchi & Lundh (2003)	1	183	MPS	0	1	0	0	P	E EXT	−.12 −.24
Schwenke, Ashby, & Gnilka (2014)	1	238	APS-R	1	1	0	0	ES, FA	B S	.12 .21
Scott, Yap, Francis, & Schuster (2014)	1	240	MPS-F	0	1	0	0	FA	A D	.45 .23
Sherry, Gautreau, Mushquash, Sherry, & Allen (2014)	1	218	MPS, MPS-F, Other	1	1	0	0	FA	D E	.35 −.48
Sherry, Hewitt, Sherry, Flett, & Graham (2010)	1	1,258	MPS	1	1	1	1	P	C E PER	.05 −.27 −.08
Shoss, Callison, & Witt (2015)	1	154	MPS	1	1	1	1	P	C PER	.31 .09
Spence & Robbins (1992)	1	134	Other	1	1	0	1	P	S W	.46 .42
Spence & Robbins (1992)	2	157	Other	1	1	0	1	P	S W	.50 .41
Stoeber, Davis, & Townley (2013)	1	133	MPS	0	1	0	0	P	M W	.06 .18
Tziner & Tanami (2013)	1	139	APS-R	0	1	1	1	ES, FA	M W ENG	−.04 .33 .10

Table 2 (*continued*)

Reference	Sample number	N	Perfectionism scale used	Location	Publication status	Job type	Sample type	Dimensionality	Correlates	Effect size with perfectionism
Vartanian & Grisham (2012)	1	142	MPS-F	0	1	0	0	FA	E	−.57
Vartanian & Grisham (2012)	2	178	MPS-F	0	1	0	0	FA	E	−.41
Vergauwe, Wille, De Fruyt, & Anseel (2015)	1	201	MPS-F	0	1	1	1	ES, FA	C	.06
									E	−.26
									PER	−.07
									EXT	.13
									AGR	−.22
									OPEN	−.01
Vliegen, Luyten, Meurs, & Cluckers (2006)	1	244	Other	0	0	0	0	FA	A	.55
									D	.13
Wirtz et al., (2007)	1	47	MPS-F	0	1	0	0	FA	A	.45
									B	.31
									C	.14
									D	.49
									E	−.31
									EXT	.03
									AGR	−.15
									OPEN	−.24
Wirtz, Ehlert, Kottwitz, La Marca, & Semmer (2013)	1	43	MPS-F	0	1	0	0	FA	S	.22
Włodarczyk & Obacz (2013)	1	100	Other	0	1	0	1	ES, FA	B	.08
									ENG	−.06
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	1	362	MPS-F	0	1	1	1	FA	H	.23
									W	.58
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	2	183	MPS-F	0	1	1	1	FA	D	.17
									H	.13
									W	.68
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	3	594	MPS-F	0	1	1	1	FA	H	.07
									W	.62
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	4	100	MPS-F	0	1	1	1	FA	W	.81
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	5	100	MPS-F	0	1	1	1	FA	ENG	.02
									W	.70
Wojdylo, Baumann, Buczny, Owens, & Kuhl (2013)	6	120	MPS-F	0	1	1	1	FA	B	.23
									W	.73
Yap, Gibbs, Francis, & Schuster (2016)	1	382	MPS-F	0	1	0	0	ES, FA	A	.23
									C	.27
Zwaan, Ter Bogt, & Raaijmakers (2009)	1	340	MPS	0	1	0	1	P	E	−.08
									PER	.04
									EXT	.08
									AGR	.23
									OPEN	.26

Note. Location: 1 = North America, 0 = other. Publication status: 1 = published, 0 = unpublished (including dissertations). Job type: 1 = full-time employees, 0 = other (mixed sample/unknown/shifts). Sample type: 1 = organization-based, 0 = other. Dimensionality: P = perfectionism; ES = excellence-seeking; FA = failure-avoiding. Correlates codes: B = burnout; E = emotional stability; PER = performance; W = workaholism; A = anxiety; D = depression; S = stress; C = conscientiousness; ENG = engagement; H = hours worked; M = motivation; EXT = extraversion; AGR = agreeableness; OPEN = openness.

Table 3
Correlates and Moderators of Perfectionism Coding, Their Definitions, and Measures

Variable	Variable conceptualization	Example scales
Dependent variables		
Conscientiousness	Personality dimension reflecting one's overall dependability, achievement-orientation, and perseverance (Barrick & Mount, 1991)	• International Personality Inventory Pool's Big Five Factor markers (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006) used in Clark, Lelchook, & Taylor, 2010 • NEO-PI–R (Costa & McCrae, 1992) used in Dunkley, Blankstein, & Berg, 2012
Emotional stability	Personality dimension characterized by the lack of anxiety, hostility, depression, and personal insecurity (Barrick & Mount, 1991)	• International Personality Inventory Pool's Big Five Factor markers (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006) used in Clark et al., 2010 • NEO-PI–R (Costa & McCrae, 1992) used in Dunkley et al., 2012
Agreeableness	Personality dimension characterized by courteousness, flexibility, and tolerance (Barrick & Mount, 1991)	• International Personality Inventory Pool's Big Five Factor markers (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006) used in Clark et al., 2010 • NEO-PI–R (Costa & McCrae, 1992) used in Dunkley et al., 2012
Extraversion	Personality dimension characterized by ambition and sociability (Barrick & Mount, 1991)	• International Personality Inventory Pool's Big Five Factor markers (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006) used in Clark et al., 2010 • NEO-PI–R (Costa & McCrae, 1992) used in Dunkley et al., 2012
Openness	Personality dimension characterized by imagination, intellect, and artistic sensitivity (Barrick & Mount, 1991)	• International Personality Inventory Pool's Big Five Factor markers (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006) used in Clark et al., 2010 • NEO-PI–R (Costa & McCrae, 1992) used in Dunkley et al., 2012
Motivation	The set of internal and external factors that initiate work-related effort (Latham & Pinder, 2005)	• Work Extrinsic and Intrinsic Motivation Scale (WEIMS), intrinsic items (Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve, 2009) used in Stoeber, Davis, & Townley, 2013 • Achievement striving items from International Personality Item Pool (IPIP, 2001) used in Mitchelson, 2009
Hours worked	Time spent on work-relevant tasks	• Typically one-item self-report measure of hours worked in a certain time frame toward a certain goal or at work, in general; e.g., hours per week in Kaden, 1999
Workaholism	Compulsion to work incessantly and think about work even when not at work (Scottl, Moore, & Miceli, 1997)	• Work Addiction Risk Scale (WART; Robinson, 1998) used in Wojdylo, Baumann, Buczny, Owens, & Kuhl, 2013 • Workaholism Battery (Spence & Robbins, 1992) used in Perez-Prada, 1997
Engagement	A psychological state characterized by absorption in work, dedication to work tasks, and heightened energy while working (Schaufeli & Bakker, 2004)	• Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006) used in Ahmetoglu et al., 2015 • COPE Inventory (reverse coded from disengagement; Carver, Scheier, & Weintraub, 1989) used in Dunn, Whelton, & Sharpe, 2006
Burnout—overall	Prolonged reaction to chronic interpersonal and emotional stressors encountered at work (Maslach, 2003)	• Maslach Burnout Inventory-General (Maslach, Jackson, & Leiter, 1996) used in Li, Hou, Chi, Liu, & Hager, 2014 • Copenhagen Burnout Inventory (CBI Subscale; Kristensen, Borritz, Villadsen, & Christensen, 2005) used in Moate, Gnilka, West, & Bruns, 2016
Burnout—emotional exhaustion	Feelings of being emotionally overextended and depleted of one's emotional resources (Maslach, 1998)	• Maslach Burnout Inventory-General (Maslach, et al., 1996) used in Li et al., 2014
Burnout—cynicism	Negative, callous attitude towards one's job, including a loss of idealism (González-Romá, Schaufeli, Bakker, & Lloret, 2006)	• Maslach Burnout Inventory-General (Maslach, et al., 1996) used in Li et al., 2014
Burnout—reduced personal efficacy	Decline in feelings of competence and productivity (Maslach, 1998)	• Maslach Burnout Inventory-General (Maslach, et al., 1996) used in Li et al., 2014

Table 3 (*continued*)

Variable	Variable conceptualization	Example scales
Stress	Psychological response to demands for which there is something at stake, and insufficient resources exist to cope with those demands (Cohen, Kamarck, & Mermelstein, 1983)	• Perceived Stress Scale (Cohen et al., 1983) used in Bousman, 2008 • Role Stress Scale (Rizzo, House, & Lirtzman, 1970) used in Childs & Stoeber, 2012
Anxiety	Negative, highly aroused affect related to anticipation of a physical or psychological threat (Sowislo & Orth, 2013)	• State Anxiety Scale of the STAI (Speilberger, 1983) used in Murphy, 2005 • Anxiety items from Depression Anxiety Stress Scales, DASS (Lovibond & Lovibond, 1995) used in Crane, Phillips, & Karin, 2015
Depression	Loss of self-esteem and incentive, associated with low perceived probability of attaining significant life goals (Lovibond & Lovibond, 1995)	• Center for Epidemiological Studies depression scale (CES-D; Radloff, 1977) used in Flett, Besser, & Hewitt, 2005 • Beck Depression Inventory (BDI; Beck & Steer, 1993) used in Vliegen, Luyten, Meurs, & Cluckers, 2006
Job performance	Work behaviors, both job-specific and not, that affect organizational productivity (Ng & Feldman, 2008)	• Count of outputs (e.g., publications) used in Sherry, Hewitt, Sherry, Flett, & Graham, 2010 • Count of awards used in Kobori, Yoshie, Kudo, & Ohtsuki, 2011 • Score on knowledge-based exams used in Hrabluik, 2010
Moderators		
Scale used	Indicator of the scale used to measure perfectionism and its dimensions (if applicable)	• See Table 1: APS-R, MPS, MPS-F, & Other
Sample location	Geographic region where study took place	• North America: Canada, United States, Mexico • Non-North America: All other countries
Publication status	Indicator of whether study came from a paper that has been published in a peer-reviewed journal or not	• Published: Study was in a peer-reviewed journal publication • Unpublished: Study was a dissertation or working paper
Job type	Indicator of whether subjects for the study were noted as full-time employees (e.g., job uses all of individual's available working time, typically 40 hours a week)	• Full-time: Individuals surveyed or studied worked a full-time schedule • Other: Individuals surveyed or studied worked part-time, or study did not specify work schedule characteristics
Sample type	Indicator of where study sample was recruited from	• Organization: Sample was recruited using one or more work organizations • Other: Sample was not recruited using work organizations or did not specify

received a disproportionate amount of research focus due to the expected strength of their relationships with perfectionism. Employees that are high on perfectionism, especially excellence-seeking perfectionism, strive for order and achievement and are dutiful and organized, characteristics that are also associated with conscientiousness (Dunkley et al., 2012; McCrae & Costa, 1997). Conversely, individuals low on conscientiousness are identified as careless, irresponsible, and lazy (Barrick et al., 2001), which run counter to the high standards and concern for mistakes that characterizes perfectionism and its dimensions (Frost et al., 1990). Notably, distinguishing perfectionism from conscientiousness is the inflexibility around and focus on seeking absolutely flawless outcomes (Flett & Hewitt, 2002). Individuals high in perfectionism are also expected to be low in emotional stability (high in neuroticism), especially those that are high in failure-avoiding perfectionism, as they experience high levels of concerns over mistakes, critical thoughts, and self-doubt (Frost & DiBartolo, 2002), which are also indicative of low emotional stability. Differentiating the two are the high levels of impulsivity and hostility characteristic of low emotional stability but not perfectionism (Costa & McCrae, 1992; Dunkley et al., 2012).

Although less theoretical clarity exists linking overall perfectionism to the other three FFM traits, there is some conceptual overlap with perfectionism dimensions. For instance, agreeableness is characterized by being amenable and trusting of others (Costa, McCrae, & Dye, 1991) which is likely negatively related to the tendency to perceive others' evaluations as threats to one's self-worth that is associated with failure-avoiding perfectionism (Hewitt et al., 2017). Extraversion is expected to be positively related to excellence-seeking perfectionism given the overlapping focus on valuing achievement and sensitivity to rewards (Lucas, Diener, Grob, Suh, & Shao, 2000; Randles, Flett, Nash, McGregor, & Hewitt, 2010), but negatively related to failure-avoiding perfectionism given extraverts' tendency to be optimistic (Sharpe, Martin, & Roth, 2011). Finally, although excellence-seeking perfectionism and openness are characterized by foresight, analytical thinking about tasks, and motivation for higher levels of experiences, excellence-seeking perfectionistic tendencies include adhering to strict standards, which is inconsistent with openness (Frost et al., 1990; McCrae, 1994). Individuals high in failure-avoiding perfectionism are expected to perceive novel tasks as opportunities for failure (Slade & Owens, 1998) and therefore are expected to have lower openness to experience.

Work Effort Correlates

Researchers have investigated several ways perfectionism is related to efforts to complete tasks in a flawless manner. For instance, perfectionism is expected to be positively related to an individual's level of motivation, or the set of internal and external factors that initiate or induce action (Latham & Pinder, 2005). Individuals high in perfectionism hold high standards for their work outcomes and consequently exhibit high levels of motivation when completing work tasks (Stoeber, Davis, & Townley, 2013). In particular, individuals high in excellence-seeking perfectionism are expected to invest greater effort toward producing flawless work (Slade & Owens, 1998). However, the motivation of individuals high on failure-avoiding perfectionism is expected to be weaker due to their concerns about performing poorly, which may

be deleterious (Steel, 2007). Further, individuals high on perfectionism are expected not only to be highly motivated, but also more willing to work longer on their work tasks. Investing more time at work helps facilitate the achievement of the excessive performance standards individuals high in perfectionism set for those tasks (Burke, 2001). Also related to individuals' work efforts is workaholism, which is depicted as individuals' compulsion to work incessantly and think about work even when not at work (Scottl, Moore, & Miceli, 1997). Although a prior meta-analysis has shown a positive relationship between perfectionism and workaholism (Clark, Michel, Zhdanova, Pui, & Baltes, 2016), the study only examined overall perfectionism. However, as workaholism is often viewed as a compulsion driven by employees feeling "distressed or guilty" about not working (Spence & Robbins, 1992, p. 2), it is likely that workaholism is more strongly related to failure-avoiding perfectionism compared to excellence-seeking perfectionism.

Psychological Work State Correlates

Two core and contrasting concepts in organizational psychology that are often studied alongside perfectionism are employee engagement and burnout. Employee engagement is a psychological state characterized by absorption in work, dedication to job tasks, and experienced vigor and heightened energy while working (Schaufeli & Bakker, 2004). As employees higher in perfectionism perceive achieving excellence as important and necessary, they are expected to have greater dedication, absorption, and vigor when striving to produce flawless work (Childs & Stoeber, 2010; Tziner & Tanami, 2013). However, individuals with higher failure-avoiding perfectionism may experience lower levels of work engagement because of their increased inclination to have concerns and doubts about their actions. Conversely, employees who are high in excellence-seeking perfectionism are expected to experience greater engagement, given their inflexible focus on achievement and commensurate investments of energies into their work.

Job burnout is a chronic psychological state characterized by emotional exhaustion, cynicism, and reduced personal efficacy (Maslach, 2003). Perfectionism and burnout are expected to be positively related as employees higher in perfectionism likely experience higher levels of emotional exhaustion and reduced efficacy given the extreme expectations they place on themselves at work and their tendency to doubt their ability to fulfill job demands (Childs & Stoeber, 2012; Hill & Curran, 2016). In addition, individuals high in perfectionism are more likely to experience high levels of cynicism toward the job, especially the interpersonal elements of work, if they feel others judge their work as less than ideal or as a failure (Bieling et al., 2004; Maslach, 2003). This likely will be magnified for employees high in failure-avoiding, as compared to excellence-seeking, perfectionism as burnout involves employees' depletion and feelings of incompetence on the job (Cole, Walter, Bedeian, & O'Boyle, 2012).

Mental Well-Being Correlates

The striving for flawlessness present in individuals high on perfectionism may create substantial demands that affect various mental well-being indicators (Bakker & Demerouti, 2007; Schwenke, Ashby, & Gnilka, 2014). Greater stress levels are expected

Table 4

Means and Standard Deviations of Reliabilities for Primary Studies Used

Variable	*M* reliability	*SD*
Overall perfectionism	.83	.07
Excellence-seeking perfectionism	.83	.05
Failure-avoiding perfectionism	.87	.06
Conscientiousness	.79	.07
Emotional stability	.86	.08
Agreeableness	.82	.04
Extraversion	.87	.05
Openness	.79	.05
Motivation	.75	.09
Hours worked	1.00	.00
Workaholism	.82	.05
Engagement	.84	.10
Burnout	.86	.05
Emotional exhaustion	.89	.05
Cynicism	.83	.06
Reduced personal efficacy	.80	.06
Stress	.85	.05
Anxiety	.88	.07
Depression	.88	.06
Job performance	.85	.07
Task performance	.84	.08
Organizational citizenship behavior	.87	.07

in employees higher in perfectionism given perfectionistic tendencies to have doubts regarding their work quality and a reduced ability to cope with perceived work hassles (Dunkley et al., 2003; Stoeber & Otto, 2006). Over time, the prolonged activation of strain resulting from continually working for and worrying about one's performance is expected to result in anxiety among those higher in perfectionism (Kawamura, Hunt, Frost, & DiBartolo, 2001). Moreover, imposing excessive standards for oneself and feeling unable to meet those standards may create reoccurring experiences of unmet expectations, which can lead to depression if left unresolved (Flett, Besser, Davis, & Hewitt, 2003). These relationships with mental well-being are expected to be more pronounced for employees higher in failure-avoiding, compared to excellence-seeking, perfectionism given these individuals' tendencies to obsess about mistakes, doubt their performance, and worry about disappointing others (Stoeber & Rennert, 2008).

Relationship Between Perfectionism and Performance

Intuitively, one might assume perfectionism is positively related to job performance given that the core of perfectionism is a desire to produce faultless work outcomes. However, existing research

provides inconclusive, and even conflicting, evidence regarding the relationship between perfectionism (and its dimensions) and job performance (Hrabluik, Latham, & McCarthy, 2012; Locander, Weinberg, Mulki, & Locander, 2015). Although perfectionism is expected to be positively correlated with conscientiousness, work efforts, and engagement, all of which are predictors of higher performance (Barrick & Mount, 1991; Deci & Ryan, 1985; Rich, LePine, & Crawford, 2010), it is also expected to be positively related to neuroticism (i.e., low emotional stability), burnout, stress, and anxiety, which are associated with reduced performance (Barrick et al., 2001; Lepine, Podsakoff, & LePine, 2005; Swider & Zimmerman, 2010). In addition, even for high excellence-seeking perfectionism, striving for faultless performance in one work domain may come at the expense of performing well in another, given inherent resource constraints (e.g., time, energy; Bergeron, 2007) and the unwillingness to lower performance standards (Sherry et al., 2010). Because theoretical explanations are mixed, making a directional prediction regarding the relationship between perfectionism (and its dimensions) and job performance would be unsubstantiated.

Method

Literature Search and Inclusion Criteria

To identify studies for inclusion, we searched electronic databases including EBSCOhost (i.e., Business Source Complete, PsycINFO, and PsycARTICLES), Web of Science, and ProQuest using several combinations of keywords related to perfectionism (e.g., perfectioni* and job, employee*, work, performance, citizenship, prosocial, OCB, organization, emotional stab*, neurotic*, conscious*, motiv*, efficac*, organizational, negative affect*, positive affect*). We also posted a call for papers to relevant listservs and searched conference programs to minimize the possibility of publication bias (Cooper, 2016). This search generated 3,995 published journal articles, book chapters, and nonpublished studies, including 306 dissertations. For a study to be included in this meta-analysis, it had to meet several inclusion criteria. First, the study needed to empirically examine perfectionism and a variable(s) of interest. Second, the article needed to report enough information to calculate the correlation between perfectionism and the variable(s) of interest. Third, we included samples that consisted of work-aged (over 18) participants so as to ensure our results reflect effect sizes expected in work-age populations. Fourth, studies needed to consist of nonclinical samples of participants. Finally, studies could not be based solely on athlete or academic samples. After an initial review, 2,316 papers met these criteria.

Table 5

Meta-Analytic Relationships Between Excellence-Seeking Perfectionism and Failure-Avoiding Perfectionism

Variable	*k*	*N*	$\bar{r}$	*SDr*	$\bar{\rho}$	*SD*ρ	80%		95%		%Var
							CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	
Excellence-seeking and failure-avoiding perfectionism	48	11,898	.29	.21	.34	.24	.03	.64	.27	.41	7.83%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

Table 6

Meta-Analytic Relationships Between Perfectionism and Personality Correlates

Variable	k	n	$\bar{r}$	SDr	$\bar{\rho}$	$SD\rho$	80% CV_LL	80% CV_UL	95% CI_LL	95% CI_UL	%Var
Conscientiousness											
Overall perfectionism	16	7,104	.19	.11	.24	.14	.06	.41	.17	.31	15.54%
Excellence-seeking perfectionism	14	6,770	.30	.13	.37	.16	.18	.57	.29	.46	10.41%
Failure-avoiding perfectionism	11	4,131	−.11	.09	−.14	.08	−.24	−.03	−.20	−.08	36.01%
Emotional stability											
Overall perfectionism	27	9,776	−.19	.18	−.24	.20	−.50	.02	−.32	−.16	8.32%
Excellence-seeking perfectionism	17	7,782	−.09	.13	−.11	.15	−.30	.08	−.18	−.04	12.47%
Failure-avoiding perfectionism	20	6,318	−.35	.17	−.42	.18	−.65	−.19	−.50	−.34	9.62%
Agreeableness											
Overall perfectionism	8	3,408	.07	.14	.09	.17	−.13	.31	−.03	.21	11.44%
Excellence-seeking perfectionism	7	3,363	.11	.16	.14	.20	−.11	.39	.00	.29	8.03%
Failure-avoiding perfectionism	6	1,210	−.21	.06	−.24	.00	−.24	−.24	−.30	−.19	100.00%
Extraversion											
Overall perfectionism	15	5,269	.08	.12	.10	.13	−.07	.27	.02	.17	19.11%
Excellence-seeking perfectionism	12	4,679	.14	.09	.18	.10	.06	.30	.12	.24	28.98%
Failure-avoiding perfectionism	11	2,527	−.07	.29	−.09	.32	−.50	.33	−.28	.11	5.28%
Openness											
Overall perfectionism	8	3,409	.21	.13	.27	.16	.06	.48	.15	.39	12.15%
Excellence-seeking perfectionism	7	3,363	.26	.11	.34	.13	.17	.51	.24	.44	15.27%
Failure-avoiding perfectionism	6	1,211	−.13	.06	−.15	.00	−.15	−.15	−.21	−.10	100.00%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

Data Coding and Coding Scheme

Two of the four study authors reviewed each of the 2,316 articles identified for possible inclusion. One of the authors made the initial decision of whether a study met all inclusion criteria, and another author independently reviewed the same article to agree or disagree with the decision. All disagreements were resolved in a meeting with the author team. This resulted in 95 usable samples for coding, detailed in Table 2, including 19 dissertations. Each author coded 25% of the articles, which were then independently checked by another author (interrater agreement of 94%). Again, disagreements were resolved in a meeting with the author team.

Described in Table 3, perfectionism correlates and moderators were coded consistent with prevailing definitions and measures from the literature.[1] Coding of measures of perfectionism, and dimensions of excellence-seeking and failure-avoiding perfectionism, is reported in Table 1. Studies that did not report correlations for, or that used measures that did not assess, perfectionism dimensions were used solely in meta-analyses of overall perfectionism. In addition, the dimensions of perfectionism were examined independently when possible, as described in the conceptual development.

Meta-Analytic Procedures

Effect sizes were estimated using Schmidt-Hunter random-effects meta-analysis method (Schmidt & Hunter, 2015). As most included studies reported reliability estimates for both the independent and dependent variables, individual correction methods were used (Schmidt & Le, 2004). Local reliability estimates (e.g., coefficients alpha) were used to correct correlations for unreliability. Although infrequent, mean reliabilities, which are reported in Table 4, were used when a primary study failed to report reliability information for a given variable. To ensure statistical independence, only one correlation per sample was used for each separate meta-analysis. In cases when multiple measures of perfectionism, its dimensions, or correlates were reported for a given sample, we computed composite correlations for constructs assessed with multiple measures rather than include separate correlations for each measure.

To examine the variability of the corrected correlation across included studies, 80% credibility intervals (CVs), which specify the generalizability of a relationship (Schmidt & Hunter, 2015), were calculated. CVs excluding zero indicate that the relationship is considered to exist across situations, although the magnitude of the relationship may vary. Standard error of the mean corrected correlation was computed and used to establish the 95% confidence interval (CIs) around the mean corrected correlation. CIs excluding zero suggest that the mean true-score correlation differs from zero. Finally, the percentage of variability in observed correlations that may be accounted for by statistical artifact was calculated as moderators to relationships likely exist when a substantial amount of variance (i.e., >25%; Hunter & Schmidt, 2004) is not attributable to artifacts. Consistent with previous meta-analyses (e.g., Choi, Oh, & Colbert, 2015), we set the minimum number of samples to be included in our meta-analyses at three samples from at least two different sets of researchers as meta-analyses based on a small number of samples (ks) may suffer from second-order sampling error (Schmidt & Hunter, 2015).

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[1] Potential moderators of scale used, sample location, publication status, job type, and sample type were also coded. However, most moderator analyses produced minimal differences and were therefore excluded from subsequent tables. Full results including moderator analyses are available from Dana Harari upon request.

Table 7
Meta-Analytic Relationships Between Perfectionism and Work Effort Correlates

							80%		95%		
Variable	k	n	$\bar{r}$	SDr	$\bar{\rho}$	$SD\rho$	CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	%Var
Motivation											
Overall perfectionism	11	2,800	.19	.11	.23	.12	.08	.39	.16	.31	28.89%
Excellence-seeking perfectionism	11	2,800	.29	.15	.38	.16	.17	.59	.28	.48	16.68%
Failure-avoiding perfectionism	9	2,399	.04	.21	.04	.24	−.27	.35	−.12	.20	8.47%
Hours worked											
Overall perfectionism	9	2,871	.14	.06	.15	.01	.14	.16	.11	.19	96.87%
Excellence-seeking perfectionism											
Failure-avoiding perfectionism	7	2,246	.12	.05	.14	.00	.14	.14	.09	.18	100.00%
Workaholism											
Overall perfectionism	19	4,608	.41	.18	.49	.22	.21	.76	.39	.59	8.16%
Excellence-seeking perfectionism	7	1,673	.14	.13	.16	.15	−.03	.35	.04	.28	21.14%
Failure-avoiding perfectionism	15	3,728	.47	.16	.56	.19	.33	.80	.47	.66	9.23%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

Results

Results of the meta-analyses are reported in Tables 5 to 10. Although not the primary focus of this study, we ran a meta-analysis for the correlation between excellence-seeking and failure-avoiding perfectionism. Consistent with prior research, results reported in Table 5 indicate that the relationship between excellence-seeking and failure-avoiding perfectionism was positive and generalizable (ρ = .34).

Results reported in Table 6 indicate the relationship between perfectionism and conscientiousness was positive and shown to generalize (ρ = .24). Furthermore, the relationship with conscientiousness was found to be even stronger for excellence-seeking perfectionism (ρ = .37) but was negative and generalizable for failure-avoiding perfectionism (ρ = −.14).[2] Contrary to some extant research (Dunkley et al., 2012), the expected negative relationship between perfectionism and emotional stability received mixed support. The overall relationship between perfectionism and emotional stability was negative (ρ = −.24) with a confidence interval that excluded zero but a credibility interval that did not. Yet, analyses of dimensions provides some clarity as the relationship between emotional stability and failure-avoiding perfectionism was large and generalizable (ρ = −.42) but weak for excellence-seeking perfectionism (ρ = −.11).

Also detailed in Table 6, the perfectionism-agreeableness relationship was small and not generalizable (ρ = .09), whereas failure-avoiding perfectionism had a negative, generalizable relationship with agreeableness (ρ = −.24). The perfectionism-extraversion relationship was small and not generalizable (ρ = .10). Yet, excellence-seeking perfectionism had a positive and generalizable relationship with extraversion (ρ = .18). Surprisingly, the relationship between openness and perfectionism was found to be medium-sized, positive, and generalizable (ρ = .27). In fact, openness had differential generalizable effects with the dimensions of perfectionism, as excellence-seeking perfectionism was positively related (ρ = .34), whereas failure-avoiding perfectionism was negatively related to openness (ρ = −.15).[3]

Results reported in Table 7 support prior research suggesting a positive, generalizable relationship between perfectionism and mo-

tivation (ρ = .23). Interestingly, analyses indicated that this relationship was stronger and still generalizable for excellence-seeking perfectionism (ρ = .38) but near nil for failure-avoiding perfectionism (ρ = .04). Hours worked was found to be positively related to both overall (ρ = .15) and failure-avoiding perfectionism (ρ = .14) with the true-score correlation being modest but generalizable. Results for the perfectionism-workaholism relationship (ρ = .49) were relatively consistent with a recent workaholism meta-analysis (Clark et al., 2016), although the present study includes nearly double the amount of samples (k = 10 vs. k = 19) and observations (N = 2,738 vs. N = 4,608). Further extending this research,

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[2] An additional set of dimension-level analyses were run for all correlates using only studies that provided effect sizes for a given correlate as well as both excellence-seeking and failure-avoiding perfectionism. Results and interpretations of these additional analyses did not meaningfully differ from our main analyses (average change in ρ = |.02|) and are available from the Dana Harari upon request.

[3] At the request of the Review Team, we conducted additional analyses using existing meta-analytic correlation estimates between personality traits and variables of interest in this study (i.e., workaholism, burnout and its dimensions, anxiety, depression, and job performance; Barrick et al., 2001; Clark et al., 2016; Kotov, Gamez, Schmidt, & Watson, 2010; Mount, Barrick, Scullen, & Rounds, 2005; Swider & Zimmerman, 2010) to examine the incremental predictive validity of perfectionism over personality traits. Results indicated that overall perfectionism exhibited incremental predictive validity beyond FFM personality traits when predicting workaholism (R^2 = .27; ΔR^2 = .20), emotional exhaustion (R^2 = .33; ΔR^2 = .01), cynicism (R^2 = .23; ΔR^2 = .02), reduced personal efficacy (R^2 = .28; ΔR^2 = .01), anxiety (R^2 = .40; ΔR^2 = .09) and depression (R^2 = .36; ΔR^2 = .15) but not job performance (R^2 = .06; ΔR^2 < .01). Excellence-seeking perfectionism exhibited incremental predictive validity beyond FFM personality traits when predicting reduced personal efficacy (R^2 = .28; ΔR^2 = .01), anxiety (R^2 = .32; ΔR^2 = .02), and depression (R^2 = .25; ΔR^2 = .03) but not workaholism (R^2 = .06; ΔR^2 < .01), emotional exhaustion (R^2 = .33; ΔR^2 < .01), cynicism (R^2 = .21; ΔR^2 < .01), or job performance (R^2 = .06; ΔR^2 < .01). Finally, results indicated failure-avoiding perfectionism exhibited incremental predictive validity beyond FFM personality traits when predicting workaholism (R^2 = .39; ΔR^2 = .33), emotional exhaustion (R^2 = .36; ΔR^2 = .04), cynicism (R^2 = .25; ΔR^2 = .04), anxiety (R^2 = .39; ΔR^2 = .09), and depression (R^2 = .34; ΔR^2 = .13) but not reduced personal efficacy (R^2 = .27; ΔR^2 < .01) or job performance (R^2 = .06; ΔR^2 < .01).

Table 8

Meta-Analytic Relationships Between Perfectionism and Psychological Work State Correlates

| Variable | k | n | $\bar{r}$ | SDr | $\bar{\rho}$ | $SD\rho$ | 80% | | 95% | | %Var |
							CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	
Engagement											
Overall perfectionism	10	1,586	.01	.14	.02	.14	−.16	.20	−.08	.12	30.91%
Excellence-seeking perfectionism	8	1,117	.29	.16	.35	.18	.12	.57	.21	.48	21.73%
Failure-avoiding perfectionism	9	1,376	−.16	.10	−.19	.07	−.28	−.09	−.26	−.12	61.24%
Burnout—overall											
Overall perfectionism	25	5,981	.18	.10	.21	.09	.09	.33	.17	.26	37.98%
Excellence-seeking perfectionism	19	4,958	.07	.17	.08	.18	−.15	.31	.00	.17	13.99%
Failure-avoiding perfectionism	24	5,857	.30	.09	.34	.07	.26	.43	.31	.38	49.51%
Burnout—emotional exhaustion											
Overall perfectionism	21	4,935	.22	.13	.26	.12	.10	.42	.20	.32	25.18%
Excellence-seeking perfectionism	15	3,911	.13	.16	.15	.17	−.06	.37	.07	.24	15.51%
Failure-avoiding perfectionism	20	4,810	.35	.13	.39	.12	.24	.55	.34	.45	22.77%
Burnout—cynicism											
Overall perfectionism	16	3,405	.14	.10	.17	.09	.05	.28	.11	.22	45.77%
Excellence-seeking perfectionism	12	2,507	−.01	.15	−.01	.16	−.21	.19	−.11	.08	22.37%
Failure-avoiding perfectionism	15	3,280	.30	.12	.36	.10	.23	.49	.30	.42	34.68%
Burnout—reduced personal efficacy											
Overall perfectionism	13	2,821	.07	.11	.08	.11	−.06	.22	.01	.15	35.19%
Excellence-seeking perfectionism	10	2,238	.00	.23	.00	.27	−.35	.34	−.17	.17	8.40%
Failure-avoiding perfectionism	12	2,697	.12	.20	.15	.23	−.15	.45	.01	.29	10.65%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

results indicate failure-avoiding perfectionism and workaholism (ρ = .56) were strongly related while the excellence-seeking perfectionism-workaholism relationship was much weaker (ρ = .16) and nongeneralizable with confidence intervals that did not overlap.

The results reported in Table 8 provided mixed support for the perfectionism-engagement relationship. The overall relationship was virtually zero (ρ = .02), however, results for perfectionism dimensions provide some clarity to these tepid findings as both excellence-seeking (ρ = .35) and failure-avoiding perfectionism (ρ = −.19) had medium-sized, generalizable relationships with engagement but in opposite directions with nonoverlapping con-

fidence intervals. This suggests the criticality of perfectionism dimensions to understanding the perfectionism-engagement relationship. Also reported in Table 8, the overall relationship between perfectionism and burnout was positive (ρ = .21) and even stronger with nonoverlapping confidence intervals for failure-avoiding perfectionism (ρ = .34) compared to the nongeneralizable relationship with excellence-seeking perfectionism (ρ = .08). Although a recent meta-analysis of perfectionism and burnout (Hill & Curran, 2016) does not estimate overall effects of perfectionism and burnout, the results for analyses of perfectionism dimensions in this study are somewhat weaker (on average), perhaps due to the other study being primarily comprised of education and sports

Table 9

Meta-Analytic Relationships Between Perfectionism and Mental Well-Being Correlates

| Variable | k | n | $\bar{r}$ | SDr | $\bar{\rho}$ | $SD\rho$ | 80% | | 95% | | %Var |
							CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	
Stress											
Overall perfectionism	23	5,567	.30	.11	.36	.11	.22	.49	.31	.41	28.24%
Excellence-seeking perfectionism	14	3,107	.09	.16	.11	.17	−.10	.32	.02	.20	18.17%
Failure-avoiding perfectionism	17	4,001	.40	.10	.47	.09	.35	.58	.42	.51	34.10%
Anxiety											
Overall perfectionism	24	5,244	.30	.16	.35	.17	.14	.56	.28	.42	15.71%
Excellence-seeking perfectionism	9	2,168	.09	.07	.11	.04	.05	.16	.06	.16	75.57%
Failure-avoiding perfectionism	16	3,376	.36	.16	.42	.16	.22	.63	.34	.50	15.52%
Depression											
Overall perfectionism	25	5,615	.27	.17	.32	.17	.10	.54	.25	.39	14.88%
Excellence-seeking perfectionism	10	2,407	.08	.04	.09	.00	.09	.09	.05	.13	100.00%
Failure-avoiding perfectionism	19	3,980	.36	.16	.42	.16	.21	.63	.34	.50	15.67%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

Table 10
Meta-Analytic Relationships Between Perfectionism and Job Performance

| Variable | k | N | $\bar{r}$ | SDr | $\bar{\rho}$ | $SD\rho$ | 80% | | 95% | | %Var |
							CV_{LL}	CV_{UL}	CI_{LL}	CI_{UL}	
Job performance											
Overall perfectionism	10	3,231	.02	.11	.02	.12	−.13	.17	−.06	.10	25.57%
Excellence-seeking perfectionism	9	2,952	.05	.16	.07	.19	−.17	.31	−.06	.19	11.28%
Failure-avoiding perfectionism	8	2,737	−.03	.12	−.04	.12	−.20	.12	−.13	.05	21.26%
Task performance											
Overall perfectionism	7	2,653	.00	.10	.00	.11	−.14	.14	−.09	.09	25.49%
Organizational citizenship behaviors											
Overall perfectionism	3	578	.08	.12	.10	.12	−.05	.25	−.06	.25	34.39%

Note. k = number of samples; N = total sample size; $\bar{r}$ = sample-size weighted mean correlation; SDr = sample-size-weighted observed standard deviation of correlations; $\bar{\rho}$ = corrected mean true-score correlation; $SD\rho$ = corrected standard deviation of true-score correlation; CV = credibility interval; CI = confidence interval; LL = lower limit; UL = upper limit; %Var = percent of variance accounted for by study artifacts.

samples. These differences are reduced somewhat when only work-based samples are analyzed in the Hill and Curran (2016) study. Further, the job burnout dimensions of emotional exhaustion, cynicism, and reduced personal efficacy exhibited similar patterns of relationships with perfectionism and its dimensions as overall burnout.

Table 9 indicates nearly unanimous support for the expected positive relationships between perfectionism and stress, anxiety, and depression. Overall, perfectionism was found to have fairly sizable, positive, and generalizable true-score correlations with stress (ρ = .36), anxiety (ρ = .35), and depression (ρ = .32). Generalizable relationships with these mental well-being variables were found across the perfectionism dimensions with the exception of excellence-seeking perfectionism and stress, which had a weak relationship (ρ = .11). Further, failure-avoiding perfectionism had consistently stronger relationships with these mental well-being correlates (i.e., nonoverlapping CIs) than excellence-seeking perfectionism.

As reported in Table 10, the relationship between perfectionism and job performance was weak and not generalizable (ρ = .02).[4] There was virtually no relationship between perfectionism and task performance (ρ = .00) and a weak but inconsistent relationship with organizational citizenship behavior (OCB; ρ = .10). Similarly, weak and nongeneralizable relationships between job performance and excellence-seeking (ρ = .07), as well as failure-avoiding perfectionism (ρ = −.04), were found. Unfortunately, the limited number of samples precluded meta-analyses of the relationships between perfectionism dimensions and task performance and OCB.

A summary of the study findings appear in Table 11. Finally, results of meta-analytic regressions, reported in Table 12, indicate that together both dimensions of perfectionism explain a substantial amount of variance in study correlates and nil or weaker than expected effect sizes (e.g., engagement).

Discussion

Although perfectionism is a recognizable concept in the broader work world, where it is assumed to be "useful," "appreciated," and "rewarded" (Basco, 2000, p. 40), its coverage in organizational research has been dispersed. The lack of research focus in organizational psychology in particular is especially striking given the magnitude of effects found across the analyses in this study (more than a dozen ρs were found to be at least |.35|). Simply put, results of this study highlight the notable impact perfectionism and its dimensions have on employees and organizations. Therefore, it was imperative to not only codify these sizable effects, but also conceptually synthesize existing research into a framework and nomological net by which scholars can further explore the powerful, yet nuanced, influence of perfectionism at work.

Based on our conceptual and empirical review of perfectionism research, the answer to the question "is perfect good?" is that in total, perfectionism is likely not constructive at work. The consequences of high levels of perfectionism, especially failure-avoiding perfectionism, for employees do not appear to be equally counteracted by its advantages. Whereas a few of the correlates indicate that perfectionism may be beneficial for employees and organizations (i.e., motivation, engagement), the equivocality of the perfectionism-performance relationship coupled with the consistent negative relationships between perfectionism and mental well-being indicators provides compelling evidence regarding the net detrimental effect of perfectionism for employees and organizations. Further, the unique and incremental predictive power of excellence-seeking and failure-avoiding perfectionism highlight the importance of considering and measuring both dimensions when attempting to better understand the consequences, or search for other possible benefits, of perfectionism at work. Distinguishing between the two revealed critical insights into perfectionism at work either by clarifying a weak effect for an expected correlate (e.g., engagement) or establishing the extent to which certain dimensions are related to critical work constructs (e.g., emotional stability, stress).

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[4] Anonymous reviewers suggested analysis of potential non-linear effects for the relationship between perfectionism and performance. These analyses, which used the mean level of perfectionism and square of the mean level of perfectionism as independent variables and effect size as the dependent variable, indicated that neither mean perfectionism at the study level (b = 1.22; p > .10) nor mean perfectionism squared (b = −.14; p > .10) were significant predictors of the effect size. However, only a limited number of samples (k = 10) assessed the relationship between perfectionism and job performance. Thus, these nonsignificant results must be interpreted with caution as they may be underpowered and the result of a Type 2 error (Gonzalez-Mule & Aguinis, in press).

Table 11
Overall Summary of Meta-Analytic Effect Sizes

Variable	Overall perfectionism	Excellence-seeking perfectionism	Failure-avoiding perfectionism
Conscientiousness	.24	.37	−.14
Emotional stability	−.24	−.11	−.42
Agreeableness	.09	.14	−.24
Extraversion	.10	.18	−.09
Openness	.27	.34	−.15
Motivation	.23	.38	.04
Hours worked	.15	—	.14
Workaholism	.49	.16	.56
Engagement	.02	.35	−.19
Burnout	.21	.08	.34
Emotional exhaustion	.26	.15	.39
Cynicism	.17	−.01	.36
Reduced personal efficacy	.08	.00	.15
Stress	.36	.11	.47
Anxiety	.35	.11	.42
Depression	.32	.09	.42
Job performance	.02	.07	−.04
Task performance	.00	—	—
Organizational citizenship behavior	.10	—	—

Note. Values are corrected mean true-score correlations.

Importantly, performance displayed virtually no relationship with perfectionism or its dimensions. Although we cannot draw definitive conclusions as to why, extant theory provides foundation for a few speculations. For instance, perfectionism's negative relationships with well-being may offset its positive relationships with work efforts; these differential effects may result in the near-nil effect size between perfectionism and performance. Alternatively, or simultaneously, perfectionism may drive employees to allocate so many resources to perfecting one task that other job tasks suffer in quality, given that time and energy are not limitless

Table 12
Meta-Analytic Regressions Using Perfectionism Dimensions

Variable	Excellence-seeking and failure-avoiding dimensions	
	Multiple R	R^2
Conscientiousness	.466	.217
Emotional stability	.421	.177
Agreeableness	.336	.112
Extraversion	.241	.058
Openness	.442	.195
Motivation	.392	.153
Hours worked	—	—
Workaholism	.561	.314
Engagement	.480	.230
Burnout	.342	.117
Emotional exhaustion	.390	.152
Cynicism	.387	.149
Reduced personal efficacy	.160	.025
Stress	.473	.223
Anxiety	.421	.177
Depression	.424	.179
Job performance	.097	.009

Note. Table entries are adjusted R/R^2 values. Ns for each regression were the harmonic means of the meta-analytic correlation estimates included in the regression (Viswesvaran & Ones, 1995).

resources (Bergeron, 2007). In any case, a near-nil relationship is an interesting finding by itself given the widely held assumption that perfectionism is beneficial for one's performance. Practitioners are not alone in making this assumption as even organizational scholars have suggested that striving for flawlessness is a necessity, advocating that "perfection should influence our day-to-day and perhaps even moment-to-moment activities," and that one should "strive for perfection every time" (Baer & Shaw, 2017, p. 1215). This highlights the current lack of understanding of the impact of perfectionism in the workplace. Thus, it is imperative for future research to disentangle if, why, how, and when possible relationships between perfectionism and its dimensions and different types of performance are positive, negative, or perhaps both, simultaneously, through multiple different mediators.

Practically, this study has implications for employees and organizations alike. By becoming knowledgeable about their perfectionistic tendencies, individuals high in perfectionism should try to incorporate practices known to mitigate negative correlates such as anxiety and burnout, perhaps by engaging in and self-setting expectations for recovery activities (Sonnentag & Fritz, 2007). Organizations and managers should also attempt to manage employees that are high on perfectionism using methods that may mitigate perfectionistic tendencies. For instance, managers should not closely monitor employees high in perfectionism (as they are likely to do that on their own), but rather take a more regulatory role to encourage employees to not overinvest in perfecting their work to their own detriment (e.g., anxiety, burnout). Relatedly, managers may be able to reduce the damaging effects of high perfectionism by being clear on expectation levels and communicating tolerance for some mistakes.

There are also limitations of this study that warrant attention in future research. First, our study is unable to address causation. This is not uncommon for meta-analyses that include perfectionism (e.g., Steel, 2007) as extant primary studies utilize cross-sectional

and self-report research designs almost exclusively.[5] This precludes testing for causality, examining these factors as possible methodological moderators, and ruling out the possibility of inflated effects due to common method bias. Still, these findings represent a critical step in establishing the importance of perfectionism at work. Second, although we found virtually no relationship between performance and perfectionism, we still consider this a fruitful avenue for future research. Because few studies included performance dimensions such as OCB and task performance, researchers should investigate whether dimensions of perfectionism exhibit stronger, more consistent relationships with specific dimensions of performance. Further, as this study was limited by sample size ($k = 10$), research designed to examine possible nonlinear effects between perfectionism and performance, as well as nonlinearity between perfectionism and other variables, might provide a more complete understanding of perfectionism at work. Relatedly, although our meta-analysis cannot determine the optimal existing measure of perfectionism, we do advocate that researchers use a measure(s) that assesses both perfectionism dimensions. Furthermore, we feel developing work-specific perfectionism scales would be a notable contribution that would likely improve predictive validities (e.g., Shaffer & Postlethwaite, 2012).

Third, although the majority of meta-analytic correlations reported in this study were based on a large number of samples, there were several important workplace variables that did not reach the minimum threshold for meta-analysis, such as commitment, work–family conflict, and turnover. Given the differential effect sizes found, future research should investigate possible relationships between perfectionism and other prominent attitudinal and behavioral outcomes (Harrison, Newman, & Roth, 2006) as well as possible moderators. Applying a multilevel lens (Chan, 1998) when examining perfectionism, and its dimensions, may also improve our understanding of perfectionism and individual, group, and organizational outcomes. For instance, congruence between manager and subordinate perfectionism levels, or between team members, may be an important underlying mechanism between perfectionism and outcomes such as performance or social loafing (Matta, Scott, Koopman, & Conlon, 2015). Finally, there is little research that conceptualizes "low" perfectionism.[6] Although this issue is present in other literatures within organizational psychology (e.g., affect, life satisfaction; Tay, 2015), future research should work to illuminate what it means to be at the low end of the perfectionism continuum.

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[5] As pointed out by an anonymous reviewer, this may also be an alternative explanation for the lack of effect size between perfectionism and job performance.

[6] Thank you to an anonymous reviewer for bringing this to our attention.

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