Received: 5 September 2017 | Revised: 7 May 2018 | Accepted: 4 June 2018

DOI: 10.1002/da.22808

REVIEW

WILEY ADAA ANXIETY AND DEPRESSION ASSOCIATION OF AMERICA

Malaise with praise: A narrative review of 10 years of research on the concept of Fear of Positive Evaluation in social anxiety

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Funding information
European Research Council (ERC); Grant/Award Number: ERC-StG-2014 639445 NewEat

Social anxiety is characterized by a fear of being negatively evaluated by others (i.e., Fear of Negative Evaluation [FNE]). In 2008, Weeks, Heimberg, and Rodebaugh proposed Fear of Positive Evaluation (FPE) as a second cognitive component in social anxiety. The article presents an overview of FPE, its psycho-evolutionary theoretical foundation and assessment by the Fear of Positive Evaluation Scale as well as relevant psychometric research on demographic characteristics. The relationship of FPE with a wide range of established dimensions from clinical, personality, and social psychology (i.e., self-esteem, perfectionism, or quality of life) will be reviewed. The role of FPE for psychological comorbidities such as other anxiety disorders, depression, eating, and substance use disorders as well as for treatment of social anxiety will be discussed. Future research might address questions of causality of FPE relative to related constructs, further data on psychometric properties, as well as on its independence from FNE in longitudinal studies. In sum, FPE seems to be a valid and reliable construct that explains cognitions, emotions, and behavior related to social anxiety at subclinical and clinical levels and therefore enriches the psychometric repertoire in the fields of social psychology, personality, and clinical psychology.

KEYWORDS
fear of negative evaluation, fear of positive evaluation, positivity impairment, social anxiety

1 | INTRODUCTION

Most contemporary models of social anxiety disorder (SAD) and subclinical social anxiety recognize its multidimensional nature, comprising emotional and cognitive as well as physiological and behavioral aspects. One of the most prominent symptom clusters, Fear of Negative Evaluation (FNE), is directly addressed in criterion B of the diagnostic criteria in the DSM-5 and pertains to a fear that an individual will act in a way that will be negatively evaluated by relevant others (DSM-5; American Psychiatric Association, 2013). However, several important clinical characteristics of individuals with higher social anxiety remain largely unexplained and this has fueled the search for additional components or dimensions of social anxiety. One set of observations relate to "positivity impairments" (for a review, see Gilboa-Schechtman, Shachar, & Sahar, 2014): entailing the failure to profit emotionally from positive feedback and the generally reduced positive affect. Hence, Weeks et al. proposed a second cognitive component of social anxiety in 2008—Fear of Positive Evaluation (FPE; Weeks, Heimberg, & Rodebaugh, 2008a). FPE was defined as "feelings of apprehension about others' positive evaluations of oneself, and distress over these evaluations" (Weeks & Howell, 2014, p. 69).

Can one really fear positive evaluation? The present paper provides an overview of 10 years of research on the somewhat provocative concept of FPE to evaluate whether FPE complements FNE in a more comprehensive model of the range of phenomena clustered around social anxiety and whether it might inspire more effective treatments for SAD. FPE has since been tested in various domains (e.g., clinical, social, and personality) with a diversity of assessment methods like psychometric, experimental, or naturalistic studies. The present review will cover the theoretical basis of FPE, its measurement, and related psychometric and experimental findings as well as its relationship with psychopathology and treatment before closing with a summary and future directions.

2 | THEORIES OF FPE (AND FNE) AND SUPPORTING EVIDENCE

2.1 | FPE as anticipated FNE?

Why do some people feel uneasy and anxious when praised? Is this something different than fearing negative evaluation? Early studies by Wallace and Alden (1995, 1997) provided some preliminary support for the importance of positive social situations in social anxiety: when receiving positive feedback, patients worried that others would expect more of them in the future. They also believed that their future performance would not improve in accordance with the higher standards of others so that the initial positive feedback would ultimately lead to a negative evaluation. According to this reasoning, FPE would *not* be conceptualized as a distinct construct independent from FNE, but rather as a *delayed* form of FNE (since it is ultimately the *negative* evaluation that is feared).

However, existing evidence questions the notion of FPE as a delayed form of FNE: as will be reviewed below, several studies have supported the distinction of FPE and FNE by yielding a two-factor structure for respective questionnaires and showing incremental validity of FPE above and beyond FNE. Additionally, a longitudinal psychometric study by Rodebaugh, Weeks, Gordon, Langer, and Heimberg (2012) in undergraduates supported FNE and FPE as distinct, trait-like components: The authors tested if FPE and FNE at three measurements, across 3 weeks, are better accounted for by a single (primarily FNE) or distinct (FNE and FPE) latent variables. Whereas a single-factor model with state FNE and FPE on a single latent variable showed poor fit, a two-factor model with state FNE and FPE on distinct latent variables showed a much better fit. Moreover, neither FNE nor FPE prospectively predicted each other and their temporal relationships were accounted for by their correlated underlying trait components. To conclude, participants' trait-like levels of FNE *and* FPE determined their state responses at varying time points, providing support for their distinction. In addition to psychometric studies, laboratory-based experimental studies also support the distinction of FNE and FPE: when simulating negative and positive social interactions and respective evaluations with short evaluative video clips in undergraduates, FNE correlated with state anxiety and unpleasantness responses to negative videos while FPE correlated with such responses to positive videos (Reichenberger, Wiggert, Wilhelm, Weeks, & Blechert, 2015; Weeks, Howell, & Goldin, 2013). Taken together, this evidence supports the distinction between FNE and FPE instead of an account describing FPE as delayed form of FNE, despite significant correlations between the two. The next two paragraphs cover a psycho-evolutionary theory of why FPE exists and might be adaptive and what empirical evidence shows in that regard.

2.2 | Psycho-Evolutionary account of FPE and FNE

A theoretical framework for FPE stems from the *psycho-evolutionary model* of social anxiety by Gilbert (2001, 2014) and was adapted by Weeks et al. (2008a). Accordingly, individuals with stronger social anxiety perceive their environment as hierarchically organized, and see their own position in the hierarchy as relatively low. Their ultimate goal is supposedly a stable, intermediate position and an avoidance of upward or downward shifts in the social hierarchy. This "inconspicuous" intermediate position is the result of two "regulatory forces", FNE and FPE (see Figure 1). Specifically, the upward movements in the social hierarchy, implied in positive evaluation, might attract the group's attention, prompting higher-ranking group members to compete and challenge this new "rising star." Hence, the goal of FPE could be protection from this threat by avoiding making "too good" of an impression, thereby avoiding an upward shift in social hierarchy. In contrast, negative evaluation results in downward movements in the social hierarchy, eventually leading to exclusion from the group and loneliness. For most of human history, being on one's own was a threat to survival. Thus FNE helps individuals from appearing too socially undesirable for this to happen, thereby avoiding a downward shift in social hierarchy. Based on Gilbert's reasoning about FPE and its function in hierarchical social groups, Weeks and Howell (2012) have coined the term *bivalent fear of evaluation model*, in order to acknowledge that evaluation fears can occur on both ends of the valence domain—positive and negative, represented by FPE on one, and FNE on the other end.

2.3 | Tests of the psycho-evolutionary account

Several studies underpin the psycho-evolutionary conceptualization, mainly by using measures related to social ranking: The self-report measure *Concerns of Social Reprisal* Scale, designed to measure concerns of reprisal and retaliation due to specifically making a positive impression on others (e.g., "I make an effort not to steal the spotlight from others who are more outgoing than I am."), correlated higher with FPE-measures than with FNE-measures in an undergraduate sample as well as in a sample of patients diagnosed with SAD (FNE should account for the concerns of social reprisal due to forming a negative impression; Weeks & Howell, 2012; Weeks, Menatti, & Howell, 2015). Further, indirect evidence comes from the abovementioned laboratory study by Reichenberger et al. (2015), which measured feelings of *pride* when receiving positive social feedback through the abovementioned positive evaluative videos. Pride is of interest in this context since it is thought to reflect social ranking with higher levels of pride corresponding with a higher social position. Results showed that higher levels of FPE went along with lower levels of pride in response to positive social-evaluative films, potentially implying an avoidance of a rise in social hierarchy and resulting rank conflicts. Strikingly, the opposite pattern was found for FNE: higher levels of FNE went along with higher levels of pride in response to positive social-evaluative films, potentially implying a "compensation" for the feared downward movements in social hierarchy. Relatedly, in a community sample, *adaptive perfectionism*—adherence to high but attainable personal standards—was lower in individuals with high FPE (Yap, Gibbs, Francis, & Schuster, 2016). Attaining these higher standards might go along with receiving positive evaluations (and resulting rank conflicts) and might therefore be avoided (maladaptive perfectionism [strong concerns about making mistakes], by contrast was elevated in high FPE individuals). Further psychometric studies in undergraduate populations found that FPE

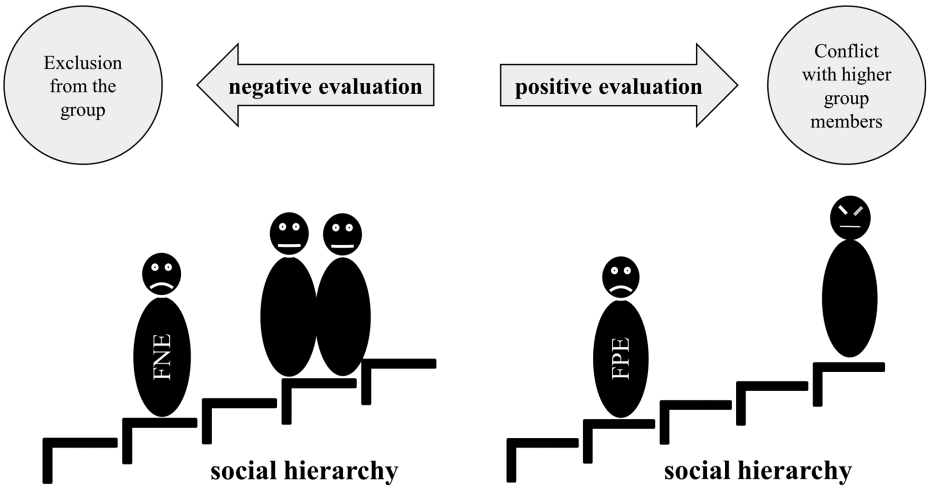

FIGURE 1 Fear of Negative Evaluation (FNE) in the left panel prevents a downward shift in social hierarchy, with regard to being ostracized by the group, following negative evaluation. By contrast, Fear of Positive Evaluation (FPE) in the right panel prevents an upward shift in social hierarchy, which would otherwise lead to conflicts with higher ranking group members, following positive evaluation

was related to *submissive cognitions and behaviors* (e.g., repeatedly apologizing for minor mistakes) and lower self-rankings in social hierarchies (Weeks, Heimberg, Rodebaugh, & Norton, 2008b; Weeks, Jakatdar, & Heimberg, 2010; Weeks, Rodebaugh, Heimberg, Norton, & Jakatdar, 2009). The relevance of FPE for submissive behavior was also supported by an experimental study by Rios, Fast, and Gruenfeld (2015): power/hierarchical position in social groups was manipulated by assigning participants to either a high power position (boss vs. worker) or equivalent power (worker vs. worker) in a reasoning task. "Need to belong" represented the second factor, manipulated by having participants write about a social exclusion situation versus a control situation (shopping for groceries). FPE was measured at the state level. Results showed that even when in a dominant position, participants with a high need for belonging showed submissive behavior and this latter effect was largely accounted for by state FPE. Thus, besides avoiding upward movement in social hierarchy, FPE could also "stabilize" one's position, thereby supporting belonging and coherence with the social group. In conclusion, FPE correlates with traits and behaviors that collectively limit an upward movement in the social hierarchy, which can be seen as support of the psycho-evolutionary account of FPE.

3 | ASSESSMENT OF FPE

3.1 | Development, scoring, and psychometrics

In order to provide a standardized assessment tool for the concept of FPE, Weeks et al. (2008a) developed the *Fear of Positive Evaluation Scale* (FPES). Its 10 items describe encounters with different social groups (e.g., supervisors, broader public) and assess the degree to which these clearly positive social evaluations are experienced as unpleasant. Individuals are instructed to imagine the described situations with unfamiliar individuals in order to enhance anxiety. Some items emphasize the social rank of the interaction partner (e.g., "I feel uneasy when I receive praise from authority figures."). Other items explicitly model cognition (e.g., "If I was doing something well in front of others, I would wonder whether I was doing 'too well.'"), although most entail a description of emotional responses to positive feedback in various social situations (e.g., "It would make me anxious to receive a compliment from someone that I am attracted to."). The scale consists of eight positively formulated items, comprised in the scale's total score, and two reversed items, that are excluded from the total score. According to Weeks et al. (2008a), the two reversed items measure social desirability, however, no formal test has yet been applied. Items are answered on a 10-point Likert scale ranging from 0 (= not at all true) to 9 (= very true) with the sum score ranging from 0 to 72.

Several studies characterized the psychometric properties of the FPES in undergraduate samples. Internal consistency was good (α = 0.80 in Weeks et al., 2008a; α = 0.81 in Weeks et al., 2008b) and 5-week test-retest reliability acceptable (intraclass correlation coefficient = 0.70; Weeks et al., 2008a). The one-factor structure of the FPES was supported (Weeks et al., 2008a): Comparing a 10-item versus an 8-item solution using a confirmatory structural model, indicators were in favor of the 8-item solution without the two reversed items. Moreover, combined confirmatory factor analyses of FPE and FNE items indicated a better fit of a two-factor (i.e., items loading onto separate latent factors), compared to a one-factor structure, with both latent factors highly positively correlated (Weeks et al., 2008a, 2010), providing first evidence for distinction of the two constructs and discriminant validity of the FPES.

The FPES correlated significantly and positively with measures of social anxiety and related features (*Social Interaction Anxiety Scale*, *Social Phobia Scale*, *Liebowitz Social Anxiety Scale*, *Brief Fear of Negative Evaluation Scale*, *Submissive Behavior Scale*, *Interaction Anxiousness Scale*) in student samples, demonstrating convergent validity (Fergus et al., 2009; Schwarz et al., 2016; Weeks et al., 2008a; Weeks, Heimberg, Rodebaugh, Goldin, & Gross, 2012; Weeks et al., 2008b). In undergraduate samples, discriminant validity was supported by stronger correlations of FPES with social anxiety measures than with measures for depression, generalized anxiety, panic and obsessive compulsive disorder, worry, perfectionism, self-compassion, and fear of success (Fergus

et al., 2009; Weeks et al., 2008a, 2008b, 2010, 2012). In two studies the FPES failed to show discriminant validity with regard to measures of depression (Weeks et al., 2008b, 2012) and anxiety sensitivity (Weeks et al., 2008b).

Related to the previous section, and in support of criterion validity, the FPES explained unique variance in established social anxiety measures after accounting for variance explained by a measure of FNE (Weeks et al., 2008a, 2008b).[1] Furthermore, taxometric analyses in undergraduates characterized FPE as a quantitative/dimensional concept rather than a categorical one (Weeks, Norton, & Heimberg, 2009). A study by Lipton, Weeks, and De Los Reyes (2016) revealed that the co-occurrence of high levels of FNE and FPE in undergraduates is associated with higher social anxiety and associated features (e.g., depressive symptoms, safety behavior) compared to low levels on both constructs or high levels on one and low levels on the other.

3.2 | Translations of the FPES

To date, the FPES has been translated into and validated in German (Schwarz et al., 2016), Portuguese (Vagos et al., 2016), Taiwanese (Wang, Hsu, Chiu, & Liang, 2012), and Japanese samples (Maeda, Sekiguchi, Horiuchi, Weeks, & Sakano, 2015). These studies have repeatedly confirmed an acceptable internal consistency (α = 0.76–0.87), a one-factor structure using confirmatory factor analysis, convergent and discriminant validity, test-retest reliability, a two-factor structure of FNE and FPE when combined in a confirmatory as well as exploratory factor analysis, as well as a significant contribution of FPE over and above the contribution of FNE in explaining variance in established measures of social anxiety[2] (Maeda et al., 2015; Schwarz et al., 2016; Vagos et al., 2016; Wang et al., 2012). Thus, the FPES seems to be a reliable and valid measurement for FPE in multiple languages.

3.3 | Aspects of gender and culture in the FPES

Only rarely have gender differences in the FPES scores been examined: Studies of Weeks et al. (2008a) and Weeks et al. (2008b) revealed no differences according to gender in American adult samples. However, other studies showed gender differences in Canadian adults with SAD (Teale Sapach, Carleton, Mulvogue, Weeks, & Heimberg, 2015) and Portuguese adolescent samples (Vagos et al., 2016) with female participants scoring higher than male participants. In order to explore gender differences in FPES scores, a demonstration of measurement invariance of the FPES scale with regard to gender is essential, but has not been reported so far. Hence, examining gender aspects with regard to the psychometric invariance and mean differences remains a pressing issue for future research.

The small correlation of FNE and FPE (r = 0.24) in a Taiwanese undergraduate sample contrasts with higher correlations in Caucasian undergraduate and clinical samples (e.g., r = 0.59 in Fergus et al., 2009; r = 0.45 in Weeks et al., 2008a) and was attributed by the authors to cultural differences in the conceptualization of FPE (Wang et al., 2012). Interestingly, FPE seems to be factorially invariant in the different US-based ethnic groups (African American, Asian, Caucasian, and Hispanic/Latino) in undergraduates (Norton & Weeks, 2009), that is, in populations with some degree of acculturation, but a broader examination of samples residing in their country of origin seems necessary.

3.4 | Psychometric properties of the FPES in clinical and adolescent samples

Few studies have examined psychometric properties of the FPES in clinical samples with SAD (Fergus et al., 2009; Weeks et al., 2012). These studies found good psychometric properties in patients with regard to internal consistency (α = 0.86 in Fergus et al., 2009; α = 0.85 in Weeks et al., 2012), test-retest reliability over 4.5 months among waitlist patients (r = 0.80; Weeks et al., 2012), and convergent (e.g., Social Interaction Anxiety Scale, Social Phobia Scale, Liebowitz Social Anxiety Scale, Brief Fear of Negative Evaluation Scale) as well as discriminant validity (e.g., depression, worry; Fergus et al., 2009; Weeks et al., 2012). However, in the study of Weeks et al. (2012), the FPES failed to show discriminant validity with regard to a measure of worry (i.e., correlation was r = 0.29). A two-factor structure of FPE and FNE, assessed with confirmatory factor analysis with FPE and FNE as two separate latent factors, was confirmed (Fergus et al., 2009). Furthermore, in the prediction of three different social anxiety measures, FPE—added in a second step of a hierarchical regression—again contributed unique variance over and above the contribution of FNE added in the first step with a significant improvement of $R^2\Delta s > 0.08$ (Weeks et al., 2012). Consistent with this finding, Teale Sapach et al. (2015) reported that FPE in the second step of a hierarchical regression contributed unique variance to social interaction anxiety over and above FNE (5% for FPE vs. 3% for FNE) in a clinical sample with SAD, besides significant contributions of anxiety sensitivity and intolerance of uncertainty in the same step. Moreover, individuals with SAD had clearly higher FPES scores compared to healthy controls (Schwarz et al., 2016; Weeks et al., 2012; Werner et al., 2012; Wiggert et al., submitted), and higher FPE went along with experiencing stronger impairments and lower quality of life (Weeks et al., 2012). FPES scores were also sensitive to psychotherapeutic treatment: a significant decrease of scores from pre- to posttreatment was reported (Fergus et al., 2009; Valentiner, Skowronski, McGrath, Smith, & Renner, 2011), which was significantly greater than the change in FPES scores in the waitlist (Weeks et al., 2012). Finally, Weeks et al. (2012) derived a cutoff score of 22 via receiver operating characteristics (ROC) analysis as the optimal balance (sensitivity: 87.6%, specificity: 83.3%) for differentiating patients from healthy controls.

The FPES has also been successfully administered in *adolescents* (Karp et al., 2017; Lipton, Augenstein, Weeks, & De Los Reyes, 2014; Vagos et al., 2016). While in the study by Vagos et al. (2016) the FPES was solely administered to the adolescent students, Lipton et al. (2014) and Karp et al. (2017) included parents' reports of a clinic-referred sample as well. Interestingly, the correspondence between the adolescent–parent dyads in FPES scores was low, possibly due to the different social contexts observed (e.g., school context is not available to parents). Additionally in order to adapt the FPES for adolescents, Lipton et al. (2014) removed item 3 ("I try to choose clothes that will give people little impression of what I am like") as autonomy in dressing style may vary by age. Results showed acceptable to good

internal consistency ($\alpha = 0.70–0.87$), a two-factor solution of FPE and FNE, convergent validity within informant (e.g., adolescents' report of FPE positively related to adolescents' report of social anxiety), criterion-related validity within informant (e.g., adolescents' report of FPE/FNE contributed significantly to state anxiety during social interactions), and a significant, unique contribution of FPES scores to social anxiety, avoidance, and safety-seeking behaviors (Karp et al., 2017; Lipton et al., 2014; Vagos et al., 2016). Despite a low correspondence of parent and adolescent's FPES scores, both versions validly predicted adolescents' reports of social anxiety and safety-seeking behavior (Lipton et al., 2014). Therefore, a multi-informant approach can be recommended when administering the FPES in adolescent samples.

4 | CORRELATES OF FPE: PERSONALITY, EMOTIONS, COGNITIONS, AND BEHAVIORS

Research on FPE has expanded rapidly in recent years, demonstrating relationships with a large number of well-established psychobiological variables.

4.1 | Personality and quality of life

Indicative of the broad relevance of FPE, it has been shown to relate to a variety of personality characteristics and quality of life in clinical and nonclinical samples. Individuals with higher FPE (combined from clinical, community, and undergraduate samples) demonstrated specific temperamental vulnerabilities, namely higher avoidance tendencies and lower approach tendencies (Rodebaugh et al., 2017). Specifically, temperamental avoidance predisposition (measured with negative affect and neuroticism) was more strongly related to FPE and FNE compared to approach (measured with positive affect and extraversion), however, (lack of) approach related more strongly with FPE than FNE (Rodebaugh et al., 2017). SAD patients with high FPE levels further exhibit lower self-esteem (Dryman, Gardner, Weeks, & Heimberg, 2016) and generally lower self-compassion, as indicated by positive associations with negative self-judgment, isolation and, overidentification with negative emotions, and negative associations with self-kindness and mindfulness (Werner et al., 2012). Similarly, the clinical sample of Weeks et al. (2012) reported significantly lower quality of life with increasing FPE showing the impact of FPE on a very general and global psychological level. More specifically, higher FPE in SAD patients went along with lower satisfaction with the quality of life domains Achievement (self-esteem, money, work and home life), Personal Growth (goals and values, learning and creativity), and Surroundings (neighborhood and community; Dryman et al., 2016).

4.2 | Emotions

FPE's emotional correlates are documented for distinct basic emotions (i.e., anxiety), social emotions (i.e., pride), as well as for broad affective clusters like negative and positive affect. Importantly, FPE was shown to not only minimize positivity but to also maximize negativity: FPE correlated positively with negative affect in general and in social situations, and correlated negatively with trait-level positive affect in undergraduate participants (Wang et al., 2012; Weeks, 2015; Weeks & Howell, 2012; Weeks et al., 2010). A naturalistic study using ecological momentary assessment showed that individuals high in FNE and FPE exhibit stronger negative affect in relation to stress with members of a wider social network (e.g., work colleagues; Reichenberger, Smyth, & Blechert, 2017). In experimental studies in undergraduate samples, individuals high in FPE showed higher levels of anxiety and negative affect/discomfort in response to an evaluated speech (Weeks & Zoccola, 2015, 2016) or essay (Weeks et al., 2008b) and to social-evaluative film clips depicting positive statements (for an exception, see Miedl et al., 2016; Reichenberger et al., 2015; Weeks et al., 2013; Wiggert, Wilhelm, Reichenberger, & Blechert, 2015). Also using an evaluated speech as a stressor, Carter, Sbrocco, Riley, and Mitchell (2012) showed that FPE levels in undergraduates did not predict anxiety increases from pre- to post-speech better than FNE. However, after receiving negative, positive, or no feedback, increases in anxiety in anticipation of another speech were only accounted for by FPE, not FNE.

Studies on psychophysiological responses in individuals with high levels of FPE were rather inconsistent: Some studies found increased heart rate or self-reported somatic symptoms (e.g., pounding heart, dizziness) in individuals with high levels of FPE in response to social stressors (Carter et al., 2012; Weeks & Zoccola, 2015, 2016), other studies did not find differences in psychophysiological responses (cardiovascular, facial-muscular, electrocortical; Wiggert et al., 2015) or reported even blunted cortisol responses (Weeks & Zoccola, 2016). Miedl et al. (2016) examined neural correlates of FPE during exposure to negative and positive social evaluative videos in the fMRI scanner. Higher FPE went along with stronger activity in the posterior insula while watching positive videos, a finding interpreted as increased interoceptive awareness for bodily responses in individuals with high levels of FPE. This points to another interesting aspect, namely that individuals with stronger FPE might monitor their arousal systems in response to positive feedback, possibly to subsequently hide autonomic symptoms from others (Wells et al., 1995).

4.3 | Cognitions

Individuals with higher FPE reported generally fewer positive and more negative automatic thoughts in social situations (Weeks & Howell, 2012). This might be due to specific cognitive appraisals in individuals with high levels of FPE. One type of appraisal of positive evaluation that has been studied recently is *disqualification of positive social outcomes*, the external attribution of success in social situations. To explore such potential cognitive regulation strategies in individuals with higher FPE, Weeks (2010) developed a scale measuring self- and other-oriented attributions, that is, whether one holds oneself (vs. others) responsible for positive outcomes. Self- and other-oriented disqualification of positive social outcomes was higher both in unselected individuals and in SAD patients with high FPE (Weeks, 2010; Weeks & Howell, 2012). A similar strategy for minimizing positivity is to question its validity: FPE correlated negatively with participants' belief in the accuracy of positive statements about them (Weeks et al., 2008b). Thus, several cognitive strategies have been documented that might

serve to reduce the impact of positive social outcomes when these cannot be avoided.

4.4 | Avoidance behavior

Clinical relevance of FPE would be demonstrated by its relationship with avoidance behavior—a hallmark symptom of SAD. In fact, higher FPE was associated with stronger general avoidance of social evaluative situations such as attending parties or talking to authorities (which could entail both negative and positive evaluations; Weeks & Howell, 2014). Similarly, studies of adolescent samples revealed significant contributions of FPE to avoidance behavior (e.g., participating in group sport or talking to older colleagues; Lipton et al., 2014; Vagos et al., 2016). In an experimental study, Sluis and Boschen (2014) found that the influence of social anxiety on attentional avoidance of angry faces was accounted for by FPE (an effect that was attenuated when FNE, trait anxiety, or negative affect were included as covariates) in a sample with moderate to high social anxiety. Valentiner et al. (2011) studied avoidance of social feedback in SAD patients and showed that those with high FPE preferred negative feedback over positive feedback. In the same vein, Howarth and Forbes (2015) found undergraduate participants with higher FPE to be less likely to choose positive feedback. Whereas both studies forced participants to choose between either negative or positive feedback, Weeks et al. (2010) measured preference for negative and positive feedback independently. Results showed that individuals with higher FPE preferred to receive neither form of feedback. One clinically relevant form of avoidance is safety behavior (e.g., avoiding eye contact, speaking softly). FPE correlated with such safety behaviors in an adolescent sample (Lipton et al., 2014; Vagos et al., 2016). Such a relationship was potentiated in the presence of higher FNE, as Lipton et al. (2016) found undergraduates with high levels of FPE and FNE reported the strongest safety behavior compared to individuals high on either scale or with low scores on both scales.

Engaging in safety behavior and avoidance requires a high level of awareness of possible threats in social situations. In fact, higher FPE in undergraduates was related to higher self-monitoring through higher self-consciousness in public, private, and social anxiety-specific contexts (Weeks & Howell, 2012), which might serve to monitor threats and to initiate avoidance/safety behaviors. This dovetails with findings of relatively early information processing biases in FPE: Dryman and Heimberg (2015) showed that undergraduates with high levels of FPE endorsed negative (e.g., embarrassing) words faster than positive words (e.g., funny) after being primed with ambiguous situations (e.g., people laugh after something you said).

To summarize, both laboratory as well as correlative evidence document the breadth of associated variables ranging from cognitive to emotional/affective to behavioral variables and across several domains of psychological functioning in both unselected undergraduate and patient samples. The contribution of FPE was documented not only to minimize positivity but also to maximize negativity and associated reactivity measures, demonstrating effects across both valence domains. Clearly, a sole focus on FNE would overlook many of these effects.

5 | RELEVANCE OF FPE TO PSYCHOPATHOLOGIES OTHER THAN SAD

As demonstrated thus far, FPE substantially adds to the conceptualization of social anxiety and provides explanatory power for several social anxiety–related constructs with regard to positivity minimizing. More recently, research has begun to investigate whether FPE is related exclusively to social anxiety or whether it mediates a broader vulnerability for various disorders that co-occur with social anxiety. Although the spectrum of comorbid disorders is manifold (e.g., other anxiety, mood, personality, and substance use disorders; see Szafranski, Talkovsky, Farris, & Norton, 2014), only the overlap with a few have been studied so far.

5.1 | Other anxiety disorders

Social anxiety frequently co-occurs with other anxiety disorders (e.g., Chartier, Walker, & Stein, 2003). To test the specificity of FPE to social anxiety, measures for generalized anxiety, panic disorder, and obsessive-compulsive disorder were examined alongside measures of FNE and FPE in undergraduate samples. Although FPE correlated with measures of generalized anxiety, panic, and obsessive-compulsive disorder, discriminant validity was supported, in that FPE correlated more strongly with measures of social anxiety than the other scales (Weeks et al., 2008a, 2008b).

5.2 | Depression

Theoretical accounts (Clark & Watson, 1991; Watson, 2005) acknowledge the close relationship between social anxiety and depressive symptoms that is represented not only by a high comorbidity (Fava et al., 2000; Fehm, Beesdo, Jacobi, & Fiedler, 2008; Pini et al., 1997; Preisig, Merikangas, & Angst, 2001), but also by other commonalities such as marked positivity impairment (for depressive disorder, see Bylsma, Morris, & Rottenberg, 2008; Gilboa-Schechtman et al., 2014; for social anxiety, see Kashdan, 2007) and submissive behavior (e.g., Gilbert, 2000). Thus, the SAD–depression nexus represents a challenging case for investigating the specificity of FPE to SAD.

Correlational studies have frequently found weak to moderate correlations between FPE and depression (i.e., Beck Depression Inventory – II scores) in undergraduate, adolescent, and clinical samples. Furthermore, these same studies mostly supported the discriminant validity of FPE, meaning that FPE measures predicted social anxiety better than depression measures (Fergus et al., 2009; Lipton et al., 2014; Weeks et al., 2008a, 2008b, 2012). Only one study reported a nonsignificant correlation between FPE and the depression measure, potentially due to low power (study 2 of Weeks et al., 2008b). Using structural equation modeling/hierarchical regression, Wang et al. (2012) hypothesized FNE and FPE as lower-order factors, with FNE being *specific* to social anxiety in that it would account for *more* variance in social anxiety than depression, whereas FPE would be *unique* to social anxiety (only correlated with social anxiety). Replicating and extending the approach of Wang et al. (2012),[3] Weeks (2015) obtained strikingly similar results in an unselected, undergraduate sample. Although the

hypotheses were mostly confirmed, the structural equation model test of the relationship of FPE with social anxiety versus depression remained inconclusive (despite the expected nonsignificant correlation of FPE with depression the critical model comparison—*without* as well as *with* this association—was not significant). Similarly, a study by Rodebaugh et al. (2017) applied structural equation models to test FNE/FPE as vulnerabilities for social anxiety/depression, and revealed consistent contributions of both FNE and FPE to social anxiety, but mixed results for the contribution of FPE to depression.

Pursuing an experimental approach, Reichenberger, Wiggert, Agroskin, Wilhelm, and Blechert (2017) showed that more depressive symptoms went along with lower pleasantness ratings of positive social evaluative videos, in line with the importance of positivity minimization in depression. Importantly, FPE accounted for significant variance in this relationship, documenting a significant overlap between depression and FPE in positivity devaluation. A potential mechanism through which FPE could relate to depression was recently proposed by Jordan, Winer, Salem, and Kilgore (2017). In their longitudinal study, FPE (at t_1) predicted depression (at t_3) and this was mediated by anticipatory anhedonia, that is, a deficit in looking forward to pleasurable events (at t_2). Still, FPE exhibited a direct significant effect on depression, calling for additional exploration of potential mechanisms.

To summarize, although FPE shows specificity for social anxiety on a trait level in psychometric studies, it also relates to devaluation processes in depressive symptomatology in an experimental study. Moreover the robust correlations between FPE and depression in psychometric studies with clinical as well as undergraduate samples underscore this relationship. Thus, the question of (partial) selectivity of FPE to social anxiety versus depression calls for further investigation of mediating factors that might help in refining etiological models not only of SAD but also of depression and affective disorders.

5.3 | Eating-related psychopathology

Eating disorders and social anxiety are highly comorbid (Hudson, Hiripi, Pope, & Kessler, 2007) and shared domains might be of interest. Specifically, FNE seems to aggravate eating behavior symptoms (e.g., Gilbert & Meyer, 2005; Utschig, Presnell, Madeley, & Smits, 2010; Vander Wal & Thomas, 2004) in undergraduate students. A theoretical link between FPE and eating disorders was proposed by Menatti, DeBoer, Weeks, and Heimberg (2015): individuals with disordered eating may experience themselves as part of a group hierarchy with attractive individuals ranking higher than unattractive ones. Positive evaluation and upward movement in the hierarchy could result in social conflict and might therefore be avoided.

Although Levinson and Rodebaugh (2012) reported positive simple correlations of FPE with body dissatisfaction, bulimic symptoms, and shape/weight/eating concerns in an undergraduate sample, they all fell below significance when controlling for other measures of social anxiety (FNE, social appearance anxiety, social interaction anxiety, and social phobia). Moreover, while FNE was a potential vulnerability factor for both disordered eating and social anxiety, FPE constituted a unique vulnerability factor for the latter only (Levinson & Rodebaugh, 2012). Likewise, while Menatti et al. (2015) found that FPE accounted for the correlation between social anxiety and eating pathology (drive for thinness and body dissatisfaction) in undergraduates, this contribution became nonsignificant when adding FNE to the model. To conclude, while FNE may play a role in both social anxiety and eating disorders, FPE seems more specific to social anxiety. Subforms of FPE, for example, merely appearance-related FPE might exist (e.g., for appearance-related FNE, see Levinson et al., 2013) and should be examined in future research.

5.4 | Substance use

Substance use disorders often develop as a result of social anxiety, possibly as a form of dysfunctional coping or self-medicating attempt (Buckner & Heimberg, 2010). Regarding FPE, substance use might come into play to ameliorate the negative effect that arises in social situations as a consequence of fears of positive evaluation. Another possibility was suggested by Howell, Buckner, and Weeks (2016): collective alcohol use can reduce dominance behavior within groups, thereby decreasing FPE-related fears. In fact, although FPE was not related to typical alcohol consumption, it was strongly associated with drinking-related problems in undergraduate students. FNE also correlated with drinking-related problems univariately, however, when considering FNE and FPE as simultaneous predictors, only FPE remained significant. Additionally, individuals with higher levels of FPE exhibited stronger drinking motives like coping and conformity, which in turn related to drinking-related problems. Hence, FPE might represent an interesting etiological mechanism in the linkage between social anxiety and alcohol use disorder.

6 | CURRENT EVIDENCE AND CHALLENGES FOR FUTURE RESEARCH

In sum, the present review documented the breadth and diversity of FPE-related research and showed that this construct has given rise to an active and vibrant research field. Despite promising progress in the field, several questions remain open. Below we list what we consider as well-established, along with findings where results are equivocal and further research is urgently needed.

6.1 | Assessment of FPE via the FPES

Research has yielded a psychometrically valid questionnaire—FPES—to measure FPE in different groups, like undergraduates and patients, as well as in different languages. Apart from the original authors of the FPES, a variety of researchers have used the scale and found similar psychometric properties and correlates. Most importantly, the link between FPE and subclinical/clinical social anxiety scores was replicated consistently across research groups. Open research lines include (a) item adaptation to various age groups, (b) clarification of administration procedure in children/youth (multi-informant or solely to the adolescent), as well as (c) establishment of a clinical adolescence cutoff (like in the adult version). The FPES hat not yet

been administered to children where it might be useful to characterize developmental trajectories of FPE across cognitive and emotional maturation. Additionally, the invariance structure of the FPES with regard to gender and cross-cultural examinations, remains to be determined. Finally, current FPES items intermingle several social groups (e.g., fears in public vs. private settings; different audiences) and social environments (avoidable or not). A more detailed mapping of these associations could increase our understanding of FPE.

6.2 | Correlates of FPE

In relation to FNE—the more well-established construct—FPE clearly contributes unique variance to the explanation of socially anxious symptomatology (e.g., avoidance behavior, emotions) and other correlates such as personality or quality of life. Yet, there is also considerable shared variance between FNE and FPE, so that future research should continue to strive for carving out the specific contribution of FPE to this symptomatology and the distinct versus delayed relationship between FNE and FPE per se. Additionally, most studies used cross-sectional designs. Thus, despite the documented breadth of correlates of FPE, this cross-sectional research tradition precludes tests of FPE as possible precursor or cause of other outcome variables relative to a role as correlate or even consequence. Such unclear causation or temporal sequencing precludes causal treatments (e.g., low self-esteem as a consequence of FPE would call for different treatment strategies than low self-esteem as a cause of FPE). Hence, correlational cross-sectional studies (regardless of statistical analyses such as mediation analysis) need to be complemented by further experimental/interventional and longitudinal studies to study the temporal/causal relationships between FPE and related constructs. Moreover, because the majority of FPE studies originate from one laboratory, replications in different laboratories/populations/cultures will strengthen the empirical basis of FPE. Laboratory testing, while allowing for manipulation of putative mechanisms, can create artifacts: interactions with the researcher can cause discomfort per se in social anxiety. Thus, research on FPE could profit from incorporating Ecological Momentary Assessment to explore FPE in a naturalistic setting as individuals engage in their daily lives. Thus naturalistic settings should be largely uninfluenced by artifacts of the testing situation in the laboratory and tap into various meaningful contexts of daily life (at home or work; with friends or strangers, etc.). Furthermore, studies measuring physiological parameters are scarce, but could provide important information for avoidance and safety behavior or emotional outcomes. This could also clarify how "cognitive" versus "emotional" FPE is, given that the questionnaire items allude to both. Although social anxiety seems best conceptualized on a continuum (Ruscio, 2010), effects of FPE on individuals with full-blown disorders and stronger avoidance behavior might be different from those possessing anxiety in its subclinical forms.

6.3 | Other psychopathologies

FPE evolved as a cognitive component of social anxiety that exhibits promising features, which might be important in other psychopathologies. To unravel the impact of FPE in different psychopathologies, future research should compare FPE in clinical samples with specific comorbidity patterns or different clinical groups. In addition, longitudinal studies could aid in unraveling the characteristic of FPE as a specific or general vulnerability factor. Expanding the measurement of FPE to psychopathologies marked by social impairments, for example, borderline or narcissistic personality disorder could also be investigated in future research.

6.4 | Specific treatment modules

FPE is increasingly recognized as an independent component in theory and nosology. The cognitive-behavioral model of social anxiety by Heimberg, Brozovich, and Rapee (2010), for example, explicates that the probability and consequences of both negative and positive evaluations are judged and both valences of evaluation are closely monitored/feared. Other authors have recommend including FPE into the diagnostic criteria for the disorder in future revisions of the manuals (Skocic, Jackson, & Hulbert, 2015). However, FPE is still not specifically or systematically addressed by contemporary cognitive-behavioral therapy[4] programs for SAD or any other psychotherapeutic method known to us. Possibly due to this fact, FPE-related fears and positivity impairments respond to cognitive behavior therapy treatment for SAD at a slower pace than other symptom domains (Fergus et al., 2009; Weeks et al., 2012). Also in experimental approaches such as attentional bias modification trainings with negative words, FPE in participants with SAD remained resistant to change, whereas significant reductions across treatment were documented for FNE (Carleton, Teale Sapach, Oriet, & LeBouthillier, 2016). However, specifically targeting FPE by applying an attention bias modification protocol with happy faces as stimuli reduced FPE levels (Britton & Bailey, 2018). By contrast, the use of angry faces in such a training actually increased FPE levels. Thus, add-on attentional bias modification trainings might complement the existing treatments.

On a different note FPE might also be a moderator of treatment response in that it might slow therapeutic improvement: positive feedback, a key reinforcing element in cognitive behavior therapy, might not only be ineffective but actually threatening for individuals with high levels of FPE without appropriate psychoeducation or cognitive restructuring of underlying cognitions (e.g., disqualification of positive social outcomes). This may hinder treatment motivation in the sense of "doing well feels worse." Relatedly, positivity minimization in FPE might hinder the development of rewarding activities, self-reinforcement, and development of an overall positive view of the self (frequent negative thoughts). Similarly, despite the obvious implication of including positive evaluation situations into the exposure treatment hierarchy, systematic interventions on FPE should address the other trait- and state-level correlates reviewed above. To illustrate, specific avoidance strategies, such as questioning the validity of personal positive feedback, could be detected and addressed, for example, through cognitive restructuring. This could help patients in profiting from the new (positive) experiences made during exposure sessions. Thus, systematically addressing FPE in treatments for SAD, and potentially for other comorbid conditions, remains a pressing issue and might

be done in a systematic way by varying the degree of FPE-specific cognitive restructuring and specifically planned exposure exercises. This will not only benefit treatment development but might further substantiate the role of FPE in etiological models of social anxiety.

ACKNOWLEDGMENT

JB and JR were supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (ERC-StG-2014 639445 NewEat).

CONTRIBUTION

JR conducted literature searches and wrote the first draft of the manuscript. JB edited the manuscript.

ENDNOTES

[1] The prediction of the *Social Phobia Scale* (Mattick & Clarke, 1998) score was significantly improved by the inclusion of the FPES in the second step ($R^2\Delta = 0.14$ in study 2; $R^2\Delta = 0.09$ in study 3) in addition to FNE in the first step ($R^2 = 0.16$ in study 2; $R^2 = 0.43$ in study 3; Weeks et al. 2008b). Similarly, the prediction of the *Social Interaction Anxiety Scale* (Rodebaugh, Woods, & Heimberg, 2007) score was significantly improved by the inclusion of the FPES in the second step ($R^2\Delta = 0.07$ in study 2 and 3 of Weeks et al. (2008b); $R^2\Delta = 0.09$ in Weeks et al. (2008a) in addition to FNE in the first step ($R^2 = 0.22$ in study 2; $R^2 = 0.46$ in study 3 in Weeks et al. (2008b); $R^2 = 0.29$ in Weeks et al. (2008a).

[2] Vagos et al. (2016) predicted the social anxiety subscale of the *Social Anxiety and Avoidance Scale for Adolescents* (Cunha, Gouveia, & Salvador, 2008) by demographic variables in the first step, FNE in the second step ($R^2\Delta = 0.21$), and FPE in the third step ($R^2\Delta = 0.03$). Similarly, the prediction of the avoidance subscale was significant by demographic variables in the first step, FNE in the second step ($R^2\Delta = 0.15$), and FPE in the third step ($R^2\Delta = 0.04$).

[3] Instead of studying general positive and negative affect as in Wang et al. (2012), Weeks (2015) examined positive and negative affect in response to specific social situations. Moreover Weeks (2015) broadened social anxiety by including fear of public scrutiny (instead of limiting it to social interaction anxiety). Finally he included the disqualification of positive social outcomes as a second *specific* lower-order factor for social anxiety (that nevertheless accounts for variance in depression as well) next to FNE.

[4] See Weeks and Howell (2014) for an elaborated review about the clinical implications of FPE and suggestions about how to improve existing cognitive-behavioral therapies.

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How to cite this article: Reichenberger J, Blechert J. Malaise with praise: A narrative review of 10 years of research on the concept of Fear of Positive Evaluation in social anxiety. *Depress Anxiety*. 2018;1–11. https://doi.org/10.1002/da.22808