Expressing the Good in Bad Times: Examining Whether and Why Positive Expressivity in Negative Contexts Affects Romantic Partners' Responsive Support Provision

Rebecca M. Walsh and Amanda L. Forest

Department of Psychology, University of Pittsburgh

Author Note

We gratefully acknowledge the research assistants and coders in the Pitt Relationship Processes Lab for their invaluable assistance with these studies. We also thank Vicki Helgeson, Kori Krueger, John Levine, Edward Orehek, and Karina Schumann for their helpful comments on these studies or earlier drafts of this manuscript, and Laramie Martinez and Bianca Ortalano for assistance with administrative tasks that supported the preparation of this manuscript. This material is based upon work supported by the National Science Foundation under Grant No. 1941350 and by the Central Research Development Fund (Project 30526) at the University of Pittsburgh. Materials, deidentified data and SPSS syntax needed to replicate analyses reported here are available on OSF: https://osf.io/c4b69/?view_only=184d20853d914e5dbb4b2ebfa3984e5c. The pre-registration for Study 4 is available at: https://osf.io/sn6xh/?view_only=ba1b808df2d94aadb25da74f71ec0740

Abstract

Receiving high-quality, responsive support in times of distress is critical but difficult. In a theoretical review, Walsh and Forest (2021) proposed a process model that explains why support-seekers' positive expressivity can elicit—but may sometimes suppress—supportive responses from partners (providers) within distress-related contexts. In the current work, we aimed to test direct and indirect pathways linking seeker's positive expressivity in negative disclosures to provider's support, while addressing notable gaps in the existing literature. Studies considered seeker-expressed positivity as broad, unitary construct (Studies 1, 2, and 4) and explored different types of positivity (Studies 1, 3, and 4): partner-oriented positivity (e.g., gratitude), stressor-oriented positivity (e.g., optimism), and unspecified positivity (e.g., pleasant demeanor). In behavioral observation studies of romantic couples (Studies 1 and 4), seeker-expressed positivity in negative disclosures positively predicted provider responsiveness, even when controlling for seeker-expressed negativity and other plausible third variables. Online experiments with manipulations of seeker-expressed positivity (Studies 2 and 3) yielded causal evidence of positivity's direct support-eliciting effects. Considering positivity types, partner-oriented positivity and stressor-oriented positivity showed the most robust support-eliciting potential; unspecified positivity also appeared valuable in some contexts. Evidence for several of the model's indirect pathways emerged in correlational (Study 4) and experimental (Studies 2 and 3) work, providing insights into support-eliciting and support-suppressing mechanisms through which positivity operates. These findings underscore support-seekers' active role in obtaining support, highlight the value of positive expressivity for eliciting high-quality support, and lay the groundwork for further research on positive expressivity's effects in support-seeking contexts.

Expressing the Good in Bad Times: Examining Whether and Why Positive Expressivity in Negative Contexts Affects Romantic Partners' Responsive Support Provision

Over the course of their lives, people are bound to experience negative events: A loved one's health might decline, problems at work might arise, or daily hassles might upend important plans. Coping with such troubling circumstances and regulating one's negative emotions can be difficult (e.g., Baumeister et al., 2001; Brosschot & Thayer, 2003; Diener et al., 2006), but effectively managing negative events is critical, as unregulated stress can undermine health and well-being (e.g., Cohen et al., 2016; Juth et al., 2015; Lepore & Helgeson, 1998).

A powerful and common approach to navigating stressful experiences involves turning to others—especially close relationship partners—for comfort or support (American Psychological Association [APA], 2018; Rimé et al., 2020; Taylor, 1991). A wealth of theory and research asserts the value of receiving responsive support (i.e., support that is caring, understanding, and validating and meets the recipient's needs; Reis et al., 2004) in such times. For example, when people facing daily stressors receive responsive support, their sadness and anxiety decrease, and their relationship quality increases (Maisel & Gable, 2009). Yet, obtaining adequate support is difficult (Lepore & Revenson, 2007; Rafaeli & Gleason, 2009): The majority (66%) of Americans received less emotional support than they needed in the past year (APA, 2022).

Although people benefit from receiving responsive support in good times as well as bad (e.g., Gable et al., 2004; Peters et al., 2018), the support literature highlights the importance of having one's needs met during times of stress, challenge, or adversity (e.g., Collins et al., 2010; Mikulincer & Shaver, 2009). Perceiving that support is available if needed can buffer against the negative health consequences of stressful experiences (e.g., Cohen, 2004; Pietromonaco et al., 2021; Thoits, 2011). Beyond perceived support, there is substantial evidence that received/

enacted support is beneficial (see Feeney & Collins, 2018)—particularly when receipients seek it or recognize that it is needed (Bolger & Amarel, 2007; Uchino, 2011). Indeed, enacted support (as rated by coders) and experimental manipulations of responsive support predict favorable outcomes for recipients (e.g., increased relational well-being and positive affect, and decreased stress; Jakubiak & Feeney, 2019; for a review, see Feeney & Collins, 2015b). Accordingly, when people seek support, receiving responsive support is invaluable.

At present, there is a clear need for research that considers how people who are seeking support for negative personal experiences might go about eliciting responsive support (Feeney & Collins, 2015a; Forest et al., 2021).[1] The present work aims to contribute to filling this gap. In so doing, we examined responsive support elicitation within romantic relationships because people commonly disclose about their emotional experiences to their romantic partner and frequently rely on them for support in times of distress (APA, 2018; Rimé, 2009).[2]

Support-Seekers: Active Agents in Eliciting Support

Considerable research efforts have centered on understanding factors that influence support, emphasizing features of the support-recipient/seeker (e.g., self-esteem; Marigold et al., 2014), provider (e.g., attachment insecurity; Collins & Feeney, 2000; self-esteem; Cavallo & Hirniak, 2019), or relationship (e.g., relationship quality; Hadden et al., 2015). By contrast, research examining how seekers' behavior might influence the support they receive remains surprisingly limited (Chow & Buhrmester, 2011; Don et al., 2013; Feeney & Collins, 2015a; Feeney et al., 2017; Forest et al., 2021). As Feeney and Collins (2015a) aptly noted, "the bulk of the literature considers the support-recipient as relatively passive, as if the recipient has no responsibility in shaping his or her support outcomes" (p. 130).

However, a recent review of theory and emerging empirical evidence affirmed the active

role that seekers play in eliciting support (Forest et al., 2021; see also Barbee & Cunninhgam, 1998). Delivering responsive support requires that providers (a) perceive the seeker's need for support and (b) feel motivated to carry out the support that is needed (Forest et al., 2021). Although many factors may shape providers' motivation to offer support, theory and research highlight two particularly important motivational determinants of support: pro-relational sentiments (feelings of warmth and compassion for the seeker; Winczewski et al., 2016) and efficacy beliefs (perceiving that one's support efforts will be successful). Forest and colleagues (2021) proposed a facilitate and motivate model, in which support-seeking behaviors that facilitate providers' ability to understand seeker needs and/or motivate providers to engage in support efforts (by increasing pro-relational sentiments or efficacy beliefs) should increase seekers' chances of receiving high-quality support. Here, we adopt this approach, emphasizing what providers need to deliver responsive support, when considering the impact of seeker behavior.

Positive Expressivity

In the current work, we focus on positive expressivity—the expression of positive thoughts and/or emotions—as one type of seeker behavior that might shape responsive support. We adopt Walsh and Forest's (2021) definition of positive expressivity: the verbal and nonverbal expression of positive thoughts (e.g., optimistic beliefs, kind self-reflections) and positive emotions (e.g., happiness, gratitude). Seekers might express positivity when disclosing about negative events by, for example, recalling cherished memories of a recently deceased loved one, describing opportunities that might emerge from their stressful experience, or affectionately touching their partner when talking about their troubles.

When experiencing negative events, one might expect that people often express negativity. As an adaptive social signal, negative expressivity informs others that a seeker is distressed or has unmet needs (e.g., Feeney & Collins, 2001; Kennedy-Moore & Watson, 2001; Nesse & Ellsworth, 2009). This can prompt others to recognize those needs and provide support (Forest et al., 2021; S. Graham et al., 2008)—although some evidence suggests that increased distress is associated with receiving less support (e.g., Bolger et al., 1996; Moyer & Salovey, 1999). Despite its valuable need-signaling function, negative expressivity also poses challenges to providers: It can be unpleasant, taxing, and lead them to doubt their ability to help, undermining their motivation to provide support (e.g., Wood & Forest, 2016). As such, some scholars (Walsh & Forest, 2021) have proposed that expressing positivity in these negative expressivity-laden support-seeking contexts can be valuable in helping providers overcome the motivational challenges of supporting distressed individuals.

In a recent theoretical review paper, Walsh and Forest (2021) described evidence suggesting that people can and often do experience and express various forms of positivity in the wake of negative events. For example, people can reappraise stressful events, finding benefits and identifying experiences of growth (Helgeson et al., 2006). In stressful times, people might reflect on past or simultaneous positive experiences or find humor amid their struggles (Folkman & Moskowitz, 2000). People often express positive and negative feelings in response to the same stimulus (e.g., Aragón et al., 2015; Griffin & Sayette, 2008). When divorced adults describe their thoughts and feelings about their divorce, they commonly include statements that demonstrate self-compassion (Sbarra et al., 2012). In some contexts, people even *expect* seekers who are facing negative events to express positivity; cancer patients, for example, are expected to "think positively, to be hopeful and optimistic and not give in to despair" (McGrath et al., 2006, p. 665).

To illustrate the forms that positive expressivity might take in support-seeking contexts, consider Kate, who is talking to her partner (Alex) about her mother's recent cancer diagnosis. When disclosing to Alex, Kate might express negativity (e.g., anxiety about her mother's quality of life). She might also lovingly reach out to hold Alex's hand, express optimism about her mother's prognosis, or express gratitude for the good health of other loved ones.

Although people may express positivity in support-seeking contexts, remarkably little work has focused on the consequences of expressing positivity in such contexts. As van Kleef (2016) noted, "the interpersonal effects of mixed emotional displays are uncharted territory" (p. 231). Drawing on the literatures on positive emotion and expressivity, support, and close relationships, Walsh and Forest (2021) recently proposed a process model that explains why support-seekers' positive expressivity might shape support (see Figure 1).

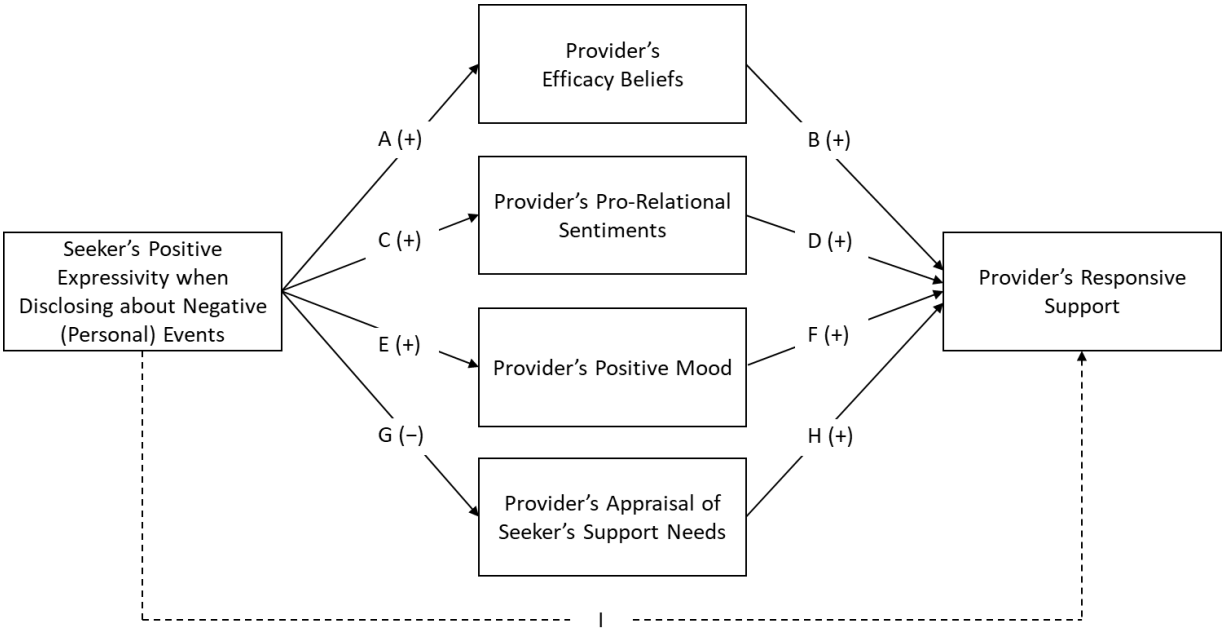
The model includes three *support-eliciting pathways* through which positive expressivity can increase support. Consistent with the two key motivational components highlighted in the facilitate and motivate model (Forest et al., 2021), seeker positivity may increase support by bolstering provider efficacy beliefs (their beliefs that they will be able to effectively support the seeker; Paths A-B) and by strengthening provider pro-relational sentiments (their feelings of warmth and compassion toward the seeker; Paths C-D). The model additionally holds that positive expressivity could enhance support by boosting provider positive mood (Paths E-F).

Regarding efficacy beliefs, as explained by Walsh and Forest (2021), seekers' positive expressions may convey that they are coping well (e.g., Vollmann & Renner, 2010). Their ability to express positivity despite their distress may make them seem more helpable, bolstering providers' efficacy beliefs (Path A). Prominent theories of motivation indicate that feeling efficacious (Bandura, 1997) or competent (Ryan & Deci, 2000) increases people's likelihood of

action. In the support domain, believing that one can effectively support a seeker positively predits support provision (e.g., Jayamaha & Overall, 2019; see Walsh & Forest, 2021; Path B).

Figure 1

Theoretical Process Model (Adapted from Walsh & Forest, 2021) Linking a Support-Seeker's Positive Expressivity to a Provider's Responsive Support



Note. Signs in parentheses denote the expected direction of effects. Paths via provider's efficacy beliefs, provider's pro-relational sentiments, and provider's positive mood are expected to be support-eliciting pathways. The path via provider's appraisal of seeker's support needs is expected to be a support-suppressing pathway. Adapted from "Can expressing positivity elicit support for negative events? A process model and review," by R. M. Walsh and A. L. Forest, 2021, *Personality and Social Psychology Review, 25*(1), pp. 3–40 (https://doi.org/10.1177/1088868320961899). Copyright 2021 by SAGE Publications.

Regarding pro-relational sentiments, the broaden-and-build theory of positive emotion (Fredrickson, 1998) and the find-remind-and-bind theory of gratitude (e.g., Algoe et al., 2008) highlight how positive emotions can enhance people's social bonds. Empirical evidence indicates that expressing positive emotions (e.g., gratitude; Algoe et al., 2010) and sharing positive thoughts when talking about negative events (e.g., Capps & Bonanno, 2000) positively predict interaction partners' pro-relational sentiments (see Walsh & Forest, 2021, for additional citations; Path C). And there is ample evidence that pro-relational sentiments predict enhanced support (Path D)—for example, providers' felings of warmth and compassion for seekers positively predicts their responsive support provision (Winczewski et al., 2016).

Regarding positive mood, seekers' expressions of positivity may enhance providers' positive mood through mood contagion (e.g., Neumann & Strack, 2000). Indeed, in hypothetical support-seeking situations, several types of seeker positive expressivity increase providers' positive emotions (see Walsh & Forest, 2021; Path E). Given that positive affect increases helpfulness (Lyubomirsky et al., 2005), provider positive mood should in turn, predict increased responsiveness (Path F).

Figure 1 also includes one *support-suppressing pathway* through which seeker positivity can *decrease* support: by reducing providers' perceptions of the seeker's support needs (Paths G-H). Whereas negative expressivity can facilitate support (signaling to providers that help is needed; Forest et al., 2021), expressing positivity when disclosing about negative experiences may reduce providers' perceptions that the seeker needs support (Path G). In negative contexts, positive expressions may convey that a seeker is suffering less or is handling things well (Keltner & Bonanno, 1997; see Walsh & Forest, 2021) and may therefore not need much support. Providers' perception of seekers' need for support is an important determinant of support

provision (Path H): Providers offer more (and more responsive) support when they perceive that seekers' support needs are higher (vs. lower; e.g., Feeney & Collins, 2001; Forest et al., 2014).

Considering the model paths together, Walsh and Forest (2021) reasoned that seeker positivity will often result in enhanced responsive support provision (via increases in provider efficacy beliefs, pro-relational sentiments, and positive mood), but may sometimes undermine responsive support (by decreasing provider perceptions of seeker need for support). We share this view.

Existing studies that lend insight into the link between positive expressivity in negative contexts and support (Path I in Figure 1) were typically designed to test other hypotheses. It is promising that the majority of the studies support the hypothesis that positive expressivity predicts increased support quantity and quality (in the few studies that considered quality; Walsh & Forest, 2021). However, additional research in this emerging area is needed to fill critical gaps in the literature, as described below (see Walsh and Forest, 2021).

The Current Work

In the current work, we sought to provide empirical evidence regarding whether and why positive expressivity affects the support that people receive from close partners in times of distress, aiming to address important gaps and limitations in existing work relevant to this topic. First, most of the evidence for positivity's direct effect on support comes from studies involving non-close relationship partners (e.g., strangers). This is especially true of experimental work. This is problematic because close partners are the people distressed individuals most often approach for support (e.g., Rimé, 2009). Second, although the benefits of received support primarily emerge when the support is responsive to the recipient's needs (Maisel & Gabel, 2009), few studies have examined positive expressivity's effects on responsiveness (most

examined support quantity only). In the present work, we examined support processes between romantic partners and considered behaviorally coded responsiveness as our primary outcome measure. Third, whereas experimental evidence linking positive expressivity to support has relied on hypothetical or static displays of positivity, we complemented correlational studies featuring dynamic operationalizations of positive expressivity in behavioral observation paradigms with carefully controlled experimental studies. Finally, almost no research to date has examined mechanisms through which seeker positivity might shape provider support—a gap we aimed to fill by testing the pathways depicted in Figure 1.

In considering the effects of positive expressivity in support-seeking contexts, we first adopted a broad, unitary definition of positivity, looking across various types of positivity. Bases for this decision stem from theoretical and empirical research on affective experiences and expression. Existing scholarship points to a single, global construct of positivity (Diener & Emmons, 1984; Mauss & Robinson, 2009; Tellegen et al., 1999; Watson, 2000; Watson et al., 1988) and has demonstrated that a single positivity factor subsumes various kinds of positive expressions (e.g., regarding excitement about an event; happiness; gratitude; Halberstadt et al., 1995; see also, Gross & John, 1995). Further, scholars have not yet agreed upon a conceptually meaningful and empirically supported way in which to group positive emotion types (L. Graham et al., 2019; Keltner, 2019). Adopting a unitary construct approach is in accordance with Watson's (2000) recommendation to investigate affective phenomena at the level of their valence before examining whether particular types of affective experiences provide additional insights into such phenomena.[3]

We additionally examined different types of positivity and how they may function, as "disentangling type-specific effects of positivity…[is] a high priority not only in scholarship on

support elicitation but also in the broader literature on positive emotion (Keltner, 2019; Sauter, 2010)" (Walsh & Forest, 2021, p. 24). Drawing on social-functional perspectives on emotional expression, which suggest that people learn about an individual's internal states related to certain targets through the individual's emotional expressions (e.g., Keltner & Kring, 1998; van Kleef, 2016, 2017), we reasoned that specific positive expressions that share the same referent (i.e., are directed at or are about the same person/thing) are likely to have similar effects on providers' support-relevant thoughts, feelings, and behavior. That is, positive expressions that are directed at/about the support-provider (i.e., partner-oriented positivity; e.g., affection, gratitude), the stressor (i.e., stressor-oriented positivity; e.g., optimism, benefit-finding), or the self (i.e., self-oriented positivity; e.g., self-compassion, confidence in one's resilience) seem likely to covey to providers the same support-relevant information as other types within that subgroup (e.g., about the seeker's helpability, the nature of the seeker-provider relationship, the seeker's need for support), and therefore produce similar effects on providers' support efforts. We also suspected that positivity that contributes to the overall pleasantness of the support situation without corresponding to any particular person/thing (e.g., pleasant tones of voice, upbeat demeanors) may constitute a fourth type of positivity: unspecified positivity.

In the current work, we considered stressor- and self-related sentiments together as one construct ("stressor-oriented positivity"; c.f. Walsh & Forest, 2021). We did so because we expected that stressor-oriented and self-oriented positive expressivity would have the same pattern of direct effects on provider support, would operate through the same mechanisms, and because they have high conceptual similarity (e.g., "I feel good about how I've been coping" and "I'm optimistic that I'll overcome this" could represent stressor-oriented positivity as well as self-oriented positivity).

Overview of Studies

We describe here the results of four studies employing complementary approaches. We conducted two behavioral observation studies involving coding of spontaneous expressions of positivity among romantic couples talking about one partner's recent upsetting experience (Study 1) or greatest fear (Study 4) in the laboratory. These observational studies also permitted examination of frequency and type of spontaneous positive expressions in these contexts. We complemented these with two experiments in which we manipulated positive expressivity as a unitary construct (Study 2) or broken into specific subtypes (Study 3) and assessed participants' responsiveness via written response messages in an imagined negative disclosure paradigm. Across studies, we sought evidence for direct and indirect pathways in Figure 1, considering positive expressivity as unitary construct and considering specific positivity subtypes.

Transparency and Openness. For all studies reported here, full study materials, SPSS syntax, and deidentified data required to replicate the analyses that we report are available on OSF: https://osf.io/c4b69/?view_only=184d20853d914e5dbb4b2ebfa3984e5c. We report how our sample sizes were determined and the reasons for any exclusions. For Study 4, we pre-registered our hypotheses, design, exclusion criteria, and data analytic plan (link provided in Study 4) and we identify analyses that deviate from or go beyond the pre-registered plan. We cite all methods and measures developed by others. We disclose all decisions that were data-dependent Where relevant, we refer to the online supplemental materials (OSM), which include more detailed descriptions of study procedures that are not germane to the current work, expanded rationale for methodological decisions, and results of supplemental analyses that expand upon the analyses reported in the manuscript itself.

Study 1

In Study 1, we examined people's spontaneous expressions of positivity when disclosing about a personal, negative event to their romantic partner (provider). Because positive expressivity as a support-seeking behavior has received little research attention to date, we examined this phenomenon in an exploratory fashion. Using coders' ratings of seekers' natural expressions of positivity, we examined the extent to which people spontaneously expressed positivity when seeking support for negative events from their romantic partners and the kinds of positivity that seekers most commonly expressed in such contexts. We focused on spontaneous expressions of partner-oriented positivity, stressor-oriented positivity, and unspecified positivity.

We additionally examined seeker-expressed positivity as a predictor of provider responsiveness (testing Path I in Figure 1). We hypothesized that unitary measures of seeker-expressed positivity would predict increases in provider's subsequent responsiveness, even when controlling for seekers' negative expressions and potential third variables. We also explored the direct links between different types of positive expressivity and provider responsiveness. Existing evidence regarding different positivity types is limited, and—to our knowledge—no work directly compares the impact of different types of positivity on support. Accordingly, we advanced no predictions about the relative effects of different positivity types on responsiveness.

Data used in Study 1 were collected as part of a larger lab study originally designed to test predictions regarding the effects of romantic rival threat. As part of the larger study, we created two conditions that we expected would shape the provider's beliefs about whether their partner was romantically interested in an ostensible other participant. The manipulation did not work as intended (for a description of the manipulation and results from manipulation check analyses, see OSM). However, this study also included a video-exchange procedure, wherein one couple member ("seeker") made a disclosure video-message about a recent upsetting event, to

which the other couple member ("provider") subsequently replied. This enabled an initial test of hypotheses regarding positive expressivity's relation to responsiveness in a negative disclosure context. An advantage of this design is that the seeker's negative disclosure was temporally separated from the provider's response, which eliminates a reverse causality explanation (responsiveness causes changes in seeker positivity within a given support interaction). Study 1 was not preregistered.

Method

Participants

We recruited 137 couples from the Department of Psychology participant pool (n = 126) or flyers posted on campus (n = 11) to participate in a lab study on impression formation and communication styles. As part of the larger study, we initially planned to collect data from 200 couples. However, given time constraints, sample size was ultimately determined by the number of couples we could recruit before the end of a specified academic semester, provided that we had collected data from a minimum of 120 couples.

Although we intended to recruit participants and their exclusive romantic partner, four pairs of participants included at least one member who reported that they were not currently in an exclusive romantic relationship. Data from these four pairs were excluded from analyses. The sample (M_{age} = 19.82 years, SD = 3.60) comprised 133 mixed-gender couples, three man-man couples, and one woman-woman couple ($M_{relationship\ length}$ = 1.46 years, SD = 2.86). Participants identified as White (75.2%), Asian (14%), Black (4.5%), multiracial (3.0%), Hispanic (2.3%), Native American (0.4%), Indian (0.4%), or other (0.4%). Each couple member received either course credit or $10-$15 in appreciation of their participation in the 90-minute lab study. We report how we determined our sample size, all data exclusions, all manipulations, and all

measures. (Measures used to test our hypotheses are described in text; see OSF for full materials).

Procedure

Before their session, one participant from each couple was randomly assigned to the "seeker" role. Seekers and providers first completed questionnaires about themselves and their relationship, independently and seated apart in the same room. Seekers then went to a different room to prepare for their upcoming video disclosure task by recalling an upsetting event that they experienced within the last year and that did not involve the provider. Next, the attempted rival threat manipulation occurred (see OSM). Seekers then made their video-message in a nearby lab room: Seekers talked about, for example, interpersonal conflicts, the death or illness of loved one, and problems related to work or school. Seekers then completed post-disclosure questionnaires (see OSF). Meanwhile, providers (who had undergone the unsuccessful rival threat manipulation; see OSM), watched the seeker's disclosure video and made a reply video-message ostensibly for the seeker, responding in whatever way felt natural to them. All participants then completed tasks not relevant to the hypotheses tested here (see OSF).

Measures

Full materials are on OSF. Here, we describe measures relevant to the current hypotheses.

Questionnaires. The background questionnaires included measures of plausible third variables that might explain variation in seeker-expressed positivity and provider responsiveness. Rosenberg's (1965) Self-Esteem Scale (10 items, e.g., "I feel that we have a number of good qualities") assessed trait self-esteem (seeker $\alpha = .90$; provider $\alpha = .87$; 1 = *very strongly disagree*; 9 = *very strongly agree*). The Revised Experiences in Close Relationships scale (ECR-R; Fraley et al., 2000), which comprises an 18-item attachment anxiety subscale (e.g., "I often

worry that my partner doesn't really love me") and an 18-item attachment avoidance subscale (e.g., "I prefer not to show a partner how we feel deep down"), assessed attachment anxiety (seeker and provider αs = .90) and avoidance (seeker and provider αs = .91; 1 = *not at all;* 7 = *extremely*). The Perceived Relationship Quality Components inventory (PRQC; 18 items, e.g., "How satisfied are you with your relationship?"; Fletcher et al., 2000) assessed relationship quality (seekers: α = .91; providers: α = .90; 1 = *not at all*; 7 = *extremely*). We planned to control for these variables in some analyses, as described shortly.

Behavioral Coding. Coding of couples' support message exchange videos occurred in two phases. During Phase 1, coders, who were unaware of hypotheses, rated (a) seekers' disclosure videos for seeker-expressed positivity (as a unitary construct) and seeker-expressed negativity and (b) providers' reply videos for responsiveness. The same coders rated each seeker's disclosure video and the provider's reply video consecutively, which enabled coders to evaluate responsiveness in the context of the relevant disclosure (see Feeney & Collins, 2015a). Phase 2 expanded the constructs coded in disclosure videos. One group of coders rated disclosure videos for various types of positive expressivity; another group rated the intensity of the stressor that seekers described in their disclosure video. For full coding schemes, see OSF.

Phase 1. Three coders reported their overall impressions of seeker-expressed positivity (as a unitary construct) using one item: "How much positivity did the partner [seeker] express in his/her message?" (1 = *not at all*; 9 = *a great deal*; interrater α = .83).[4] Coders' ratings were averaged to create scores for this *single-item positivity* measure. Coders also rated seekers' disclosure videos for negative expressivity: "How much negativity did the partner [seeker] express in his/her message?" (1 = *not at all*; 9 = *a great deal*; interrater α = .75). Given past work showing that negativity can elicit support (e.g., S. Graham et al., 2008), we wanted to rule out the

possibility that seekers' negative expression—rather than their positive expression—might account for any observed relation between seeker positivity and provider responsiveness. We therefore planned to include coder-rated seeker negativity as a covariate in relevant analyses.

The same group of three coders then rated the provider's corresponding reply video for responsiveness. Coders' ratings were averaged across seven items (e.g., "How supportive is this response?"; 1 = *not at all*; 9 = *extremely*) and combined to create a responsiveness composite (α = .91, interrater, α = .84; for full measure, see OSF).

Phase 2. During Phase 2, three new coders rated seekers' disclosure videos for positive expressivity. To complement the single-item global positivity measure used in Phase 1, we developed an extended positive expressivity coding scheme to capture a broad range of positive expressions (e.g., optimism, gratitude), based on types represented in existing literature as well as what the first author observed in watching a subset of disclosure videos (see Table 1 for items). Three coders used the resulting 9-item coding scheme to rate disclosure videos (interrater αs = .70 – .96; 1 = *not at all*; 9 = *a great deal*). We planned to average these ratings to create a unitary *positivity composite,* as long as the items hung together to form a reliable composite. We also planned to create type-specific sub-composites (described shortly).

Table 1

Results from a Principal Component Analysis of Coded Seeker Positive Expressivity Items (Study 1)

	Rotated factor loading		
	1	2	3
Factor 1: Partner-oriented positivity			
To what extent did this person express gratitude/appreciation for his/her partner?	**.95**	.13	.07
To what extent did this person express liking/affection for his/her partner?	**.94**	.04	.24
To what extent did this person seem to be considerate about how his/her disclosure would affect his/her partner?	**.91**	.10	.14
Factor 2: Stressor-oriented positivity			
To what extent did this person find a bright side or silver lining to the event (e.g., grew or learned from the event)?	.12	**.93**	.06
To what extent did this person express optimism about being able to resolve, come to terms with, or recover from the event in the future?	.05	**.90**	.24
Factor 3: Unspecified positivity			
To what extent did this person use humor?	.19	-.05	**.82**
Overall, how pleasant was this person's demeanor?	.04	.25	**.77**
To what extent did this person express happiness?	.27	.48	**.68**

Note. N = 125. The extraction method was principal component analysis with an orthogonal (Varimax with Kaiser Normalization) rotation. Factor loadings in bold denote each item's corresponding component. For the item involving the seeker's pleasant demeanor, coders were instructed to base their ratings for this item on their overall take on the seeker's vibe/tone/etc. We originally coded an additional positivity item assessing seeker expression of warm feelings toward people other than their support-providing partner: "To what extent did this person express warmth or affection s/he feels for other people (i.e., people apart from the partner)?" We did not include this item in the positivity composite (and omitted it from the PCA) because internal consistency results suggested that the item was not assessing the same construct as the other items(see OSM).

A final group of three coders rated seekers' disclosures for a plausible stressor-related third variable: the intensity of the seeker's stressor. To separate the stressor information from the seeker's expressivity about it, a research assistant wrote a brief description of each seeker's negative event. Three coders then rated stressor intensity from the written sumamries: "How severe is this event?" (1 = *not at all*; 9 = *extremely*) and "How would you describe the consequences of this event for someone's life?" (1 = *extremely trivial*; 9 = *extremely disruptive*), $r(124) = .85$, $p < .001$. Coders' ratings were combined across these items to create a stressor

intensity composite (interrater α = .78). We planned to control for stressor intensity in supplemental analyses testing plausible third variables.

Full study materials, SPSS syntax, and deidentified data required to replicate analyses presented here are available on OSF.

Results

Eight sets of disclosure-response videos were lost due to technological failure. Thus, the final sample comprised 125 couples. A sensitivity analysis (G*Power; Faul et al., 2009) indicated this sample would be sufficient to detect a small-to-medium population effect size (f^2= 0.06) for the link between seeker positive expressivity and provider responsiveness in a model that also included negativity and condition as predictors with 80% power (α = .05).

Seekers' Expressions of Negativity and Positivity

The message-exchange task was intended to prompt disclosures from seekers about an upsetting personal experience. Indeed, seekers expressed considerable negativity in their videos (*M* = 6.08 on a 9-point scale, *SD* = 1.16). Further, the negative events that disclosers disclosed about were relatively severe/impactful (*M* = 5.50 on a 9-point scale, *SD* = 1.77).

To assess the degree to which seekers might use positive expressivity within their negative disclosures, we examined indices of seeker-expressed positivity. The item assessing warmth toward other people (not the partner) did not correlate well with other items (corrected item-total correlation of .17; all other corrected item-total correlations were .38 to .71; see OSM for details). It also differed conceptually from other items, as it involved positivity toward a referent other than the stressor/ romantic partner. We therefore dropped this item and combined the remaining eight items to create the positivity composite measure (interrater α = .91).

Although the disclosure videos had a negative focus, they also commonly included positivity: Most seekers—78.4% according to single-item positivity scores and 68% based on positivity composite scores—expressed at least some positivity in their negative disclosure i.e., scores ≥ 2 on a 9-point scale, where 1 = *not at all*). Average levels of positive expressivity were nonetheless relatively low (single-item positivity $M = 3.59$, $SD = 1.84$; positivity composite $M = 2.51$, $SD = 0.91$). (See Table S1 in OSM for descriptive statistics and correlations for seeker-expressed negativity and positivity variables and Table S2 in OSM for correlations between seeker expressions, stressor intensity, and some seeker/provider features.)

Positivity as a Unitary Construct

To examine the direct link between positivity as a unitary construct and responsive support (Path I, Figure 1), we used each unitary positivity variable—single-item positivity (mean-centered) and the positivity composite (mean-centered)—to predict provider responsiveness in separate linear regression analyses.[5] We controlled for condition (-0.5 = low threat, 0.5 = high threat) in all analyses. We also controlled for seeker negativity (mean-centered) in all analyses, because negativity is a key determinant of support (e.g., S. Graham et al., 2008). We expected that when seekers spontaneously expressed more (vs. less) positivity, providers would behave more responsively. No main effect of condition emerged in any analysis presented here, so we describe main effects only for the seeker-expressed positivity and negativity predictors. See Table 2 (Models 1 and 2) for full results.

A model that predicted provider responsiveness from single-item positivity, seeker negativity, and condition (see Table 2, Model 1) revealed that as seekers expressed more (vs. less) positivity, providers behaved more responsively, $\beta = .37$, $sr^2 = .13$. Additionally, when seekers expressed more (vs. less) negativity, providers behaved more responsively, $\beta = .21$, $sr^2 =$

.04. No two-way interactions emerged, *p*s > .05. In a parallel model, we replaced the single-item positivity predictor with the 8-item positivity composite; we continued to control for negativity and condition. As shown in Table 2 (Model 2), a main effect of the positivity composite predictor emerged, β = .35, sr^2 = .12. Seeker-expressed negativity also predicted increased provider responsiveness, β = .18, sr^2 = .03. No two-way interactions emerged, *p*s > .09.

Table 2

Regression Models Predicting Provider Responsiveness from Seeker Positivity, Negativity, and Condition (Study 1)

	b	*SE*	95% CI	*t*	*p*
Model 1					
Single-item positivity	0.27	0.06	[0.14, 0.39]	4.32	<.001
Negativity	0.23	0.10	[0.04, 0.43]	2.40	.018
Condition	-0.11	0.22	[-0.54, 0.33]	-0.48	.634
Model statistics		R^2 = .15, $F(3, 121)$ = 7.16, p < .001			
Model 2					
Positivty composite	0.52	0.12	[0.27, 0.76]	4.18	<.001
Negativity	0.20	0.10	[0.01, 0.39]	2.06	.042
Condition	-0.07	0.22	[-0.51, 0.37]	-0.32	.750
Model statistics		R^2 = .14, $F(3, 121)$ = 6.74, p < .001			
Model 3					
Partner-oriented positivity	0.17	0.08	[0.02, 0.33]	2.20	.030
Negativity	0.14	0.10	[-0.06, 0.34]	1.41	.161
Condition	-0.12	0.23	[-0.59, 0.34]	-0.54	.594
Model statistics		R^2 = .06, $F(3, 121)$ = 2.46, p = .066			
Model 4					
Stressor-oriented positivity	0.29	0.08	[0.14, 0.45]	3.75	<.001
Negativity	0.23	0.10	[0.03, 0.42]	2.28	.024
Condition	-0.06	0.23	[-0.50, 0.39]	-0.26	.792
Model statistics		R^2 = .12, $F(3, 121)$ = 5.59, p = .001			
Model 5					
Unspecified positivity	0.59	0.15	[0.30, 0.89]	3.95	<.001
Negativity	0.22	0.10	[0.03, 0.41]	2.24	.027
Condition	-0.02	0.22	[-0.46, 0.43]	-0.07	.943
Model statistics		R^2 = .13, $F(3, 121)$ = 6.13, p < .001			
Model 6					
Partner-oriented positivity	0.06	0.08	[-0.10, 0.22]	0.70	.484
Stressor-oriented positivity	0.19	0.09	[0.02, 0.36]	2.26	.025
Unspecified positivity	0.39	0.17	[0.04, 0.73]	2.22	.028
Negativity	0.24	0.10	[0.05, 0.44]	2.48	.014
Condition	-0.02	0.22	[-0.46, 0.42]	-0.08	.934
Model statistics		R^2 = .17, $F(5, 119)$ = 4.95, p < .001			

Note. Condition (-0.5 = low threat, 0.5 = high threat). Regression coefficients (*b*) are unstandardized; standardized coefficients are reported in text.

We also ran supplemental regression models intended to rule out plausible third variables (coder-rated stressor intensity; seeker self-esteem, attachment anxiety, attachment avoidance, and relationship quality; and the same set of features of the provider). As expected, single-item positivity and the positivity composite continued to predict heightened responsiveness in all nine of their respective supplemental models (for results, see Table S3 in OSM). These findings provide initial evidence that when people express more (vs. less) positivity when disclosing about negative experiences, their partners tend to provide more responsive support.

Different Types of Positivity

To examine how different types of positive expressivity are related to provider responsiveness, we first conducted a principal component analysis (PCA) on the eight coder-rated discrete positive expressions (e.g., gratitude, optimism). Walsh and Forest (2021) proposed theoretically-derived families of positivity based on the target/referent but because empirical evidence regarding the structure of positive expressivity is limited, we used a bottom-up approach to determine type-specific groupings of positivity.

The PCA (based on a correlation matrix of the eight coder-rated positive expressions) extracted three components with eigenvalues greater than 1 that cumulatively accounted for 82.44% of the variance. As shown in Table 1, each item loaded highly (.68 - .95) onto only one component, with minimal cross-loadings (.04 - .48). The first component accounted for 45.88% of the variance and comprised three items that suggest the seeker's positive feelings about the provider: gratitude/appreciation for their partner (the provider), liking/affection for their partner, and being considerate of how their disclosure might affect their partner. The second component accounted for 22.84% of the variance and included two items assessing positivity related to the stressor and/or seekers themselves: finding a bright side or silver lining to the event, and

expressing optimism about being able to resolve/recover from the event. The final component accounted for 13.72% of the variance and comprised three items assessing positivity that did not seem to be about or directed at a particular target/referent: the seeker's use of humor, their pleasant demeanor, and their expression of happiness.

Taken together, this pattern of results is largely consistent with three families of positivity that Walsh and Forest (2021) proposed in their theoretical review. Each component's corresponding items formed composites with adequate reliability: partner-oriented positivity (three items; $\alpha = .93$), stressor-oriented positivity (two items; $r[123] = .78$, $p < .001$), and unspecified positivity (three items; $\alpha = .73$). Accordingly, we averaged each component's items to obtain type-specific sub-composite scores for partner-oriented positivity ($M = 1.98$, $SD = 1.48$), stressor-oriented positivity ($M = 2.84$, $SD = 1.47$), and unspecified positivity ($M = 2.78$, $SD = 0.76$), which we planned to use in subsequent analyses predicting responsiveness.

The type-specific sub-composite was positively correlated with each other type-specific sub-composite: partner-oriented positivity and stressor-oriented positivity, $r(124) = .20$, $p = .022$; partner-oriented positivity and unspecified positivity. $r(124) = .37$, $p < .001$; stressor-oriented positivity and unspecified positivity, $r(124) = .46$, $p < .001$. For correlations between each type-specific positivity sub-composite, seeker-expressed negativity, stressor intensity, and key features of seekers and providers, see OSM (Table S2).

Type-specific Sub-composites. To investigate the links between different types of positivity and responsive support, we initially examined partner-oriented positivity, stressor-oriented positivity, and unspecified positivity as predictors of responsiveness in separate models (controlling for negativity and condition). As shown in Table 2 (Models 3-5), positive main effects of partner-oriented positivity ($\beta = .19$, $p = .030$), stressor-oriented positivity ($\beta = .33$, $p <$

.001) and unspecified positivity (β = .34, $p < .001$) emerged in their corresponding models. No main effect of negativity emerged in the partner-oriented positivity model (β = .13, $p = .161$), but positive main effects of negativity did emerge in the stressor-oriented positivity model (β = .20, $p = .024$) and the unspecified positivity model (β = .19, $p = .027$). We then entered all three positivity sub-composites as predictors of responsiveness and controlled negativity and condition (see Table 2, Model 6). Partner-oriented positivity no longer predicted responsiveness (β = .06, $p = .484$) but stressor-oriented positivity (β = .22, $p = .025$), unspecified positivity (β = .22, $p = .028$), and negativity (β = .22, $p = .014$) each emerged as a significant (positive) predictor of responsiveness. (See OSM for exploratory moderation analyses involving types of positivity.)

In supplemental regression models intended to rule out plausible third variables deaceribed earlier (with type-specific sub-composites entered as predictors of responsiveness in separate models), the positive main effect of the partner-oriented positivity predictor held in seven (out of nine) supplemental models. Positive main effects of the stressor-oriented positivity predictor and the unspecified positivity predictor held in all nine of their respective supplemental models (see Table S4 in OSM).

Discussion

Study 1 provided initial evidence regarding seekers' use of positive expressions when seeking support for negative events from their romantic partners (providers) and the links between such positive expressions and provider support. Most people spontaneously expressed some positivity when disclosing about a personal stressor to their romantic partner. Consistent with the conceptual model's direct path (Path I, Figure 1), when seekers expressed more (vs. less) positivity, providers behaved more responsively—an effect that held when controlling for expressed negativity, stressor intensity, and important features of seekers and providers. Partner-

oriented positivity, stressor-oriented positivity, and unspecified positivity were each predictive of provider responsiveness (in separate models), but the most robust predictor of responsiveness was unspecified positivity, followed by stressor-oriented positivity.

Given that Study 1's video-exchange procedure temporally separated the seeker's disclosure and provider's response, the finding that positivity predicted responsiveness—even when controlling for several plausible third variables—is consistent with the proposition that positive expressivity may elicit responsive support within distress-related support-seeking contexts. However, only an experiment can directly speak to causality. Thus, in Studies 2 and 3, we sought causal evidence for the conceptual model's (Figure 1) direct path from seeker positivity to partner responsiveness (Path I). We also investigated mechanisms expected to underlie positivity's support-eliciting (Paths A-B, C-D, and E-F) and support-suppressing (Paths G-H) effects. We examined positivity as a unitary construct in Study 2—testing its direct and indirect effects on responsive support—and explored type-specific direct and indirect effects of partner-oriented positivity, stressor-oriented positivity, and unspecified positivity in Study 3.

Study 2

In Study 2, we experimentally manipulated positive expressivity (a combination of several kinds of positive expressions) in a support-seeking negative disclosure message and assessed provider responsiveness in an imagined email-exchange scenario procedure. Using a between-groups design, we asked participants (support-providers) to respond to one of three negative disclosure messages that they imaged came from their romantic partner. Depending on participants' randomly assigned condition, their partner expressed only negativity (negativity-only condition), negativity plus positivity (plus-positivity condition), or—to control for length differences between the negativity-only and plus-positivity conditions—negativity plus neutral

filler statements and phrases (plus-filler condition).[6] Participants then typed a reply message as if they were responding to their partner, which coders rated for responsiveness. We additionally examined mechanisms underlying the hypothesized support-eliciting effect of positivity on responsiveness (Paths A-B, C-D, and E-F, Figure 1) and considered the support-suppressing effect via need appraisals (Path G-H, Figure 1). Study 2 was not preregistered.

Method

Participants

We posted 350 study slots on Mechanical Turk, aiming to collect data from 100 participants in each of the three support-seeking conditions, plus an additional 50 participants in case of exclusions or incomplete data. Three-hundred eighty-three adults (49.5% female; M_{age} = 35.2 years, SD = 10.40) filled out at least a portion of the survey.[7] Of these participants, 373 met the inclusion criterion of being in an exclusive romantic relationship (167 married, 15 engaged, 52 cohabiting, 110 dating, 29 unreported; $M_{relationship\ length}$ = 7.59 years, SD = 8.54; 89.2% mixed-gender relationships). These participants identified as White (77.9%) Hispanic (8.7%), Black or African American (6.7%), Asian (4.9%), American Indian or Alaska Native (0.9%), multiracial (0.5%), or Native Hawaiian or Pacific Islander (0.3%). Data from nine respondents who were not in an exclusive relationship were excluded from analyses.[6] Participants received $1.00. We report how we determined our sample size, all data exclusions, all manipulations, and all measures. (Measures used to test our hypotheses are described in text; see OSF for full materials.)

Procedure

Participants completed all study tasks and questionnaires in a single online session. They first reported their gender and completed pre-manipulation questionnaires (see OSF).

Participants were then asked to imagine that their partner sent them an email, in which their partner recounted a conflict they had with a friend that afternoon. Depending on participants' randomly assigned condition, they received one of three versions of this email. All versions of the email described the conflict in the same way (e.g., "We got into a pretty heated argument, and [they] basically told me that I'm an idiot [. . .] and then [they] just left the restaurant in the middle of lunch!") and contained nearly all the same negative sentiments (e.g., "[their] reaction caught me off-guard. I'm really upset right now." and "I'm feeling really shaken up about this whole thing. I'm not sure where we stand now."). Critically, however, the three emails varied in the presence of other content, such that they included no additional content (negativity-only condition), included additional positive content (e.g., "I hope you've been having a great day so far!" and "I'm lucky that I have you to share these things with;" plus-positivity condition), or included additional neutral filler content (e.g., "Just wanted to check in. Can't believe it's almost 4:00." and "I figured I'd send this when I had the chance."; plus-filler condition). (See OSF Study Materials for full emails). The plus-positivity condition included statements reflecting multiple types of positivity (e.g., partner-oriented, stressor-oriented, and unspecified positivity).

Our main interest was in comparing the plus-positivity condition to the negativity-only condition, but the addition of positivity created a length confound. We therefore created the plus-filler condition, in which participants received an email with neutral filler content added to make it match the length of the plus-positivity condition email. The strongest evidence for positive expressivity's value in support-seeking distress-related contexts would be if the plus-positivity condition elicits more responsiveness than both the negativity-only condition and the plus-filler condition. However, it is possible that the added neutral content used in the plus-filler condition may promote responsiveness compared to the negativity-only condition as well.

Participants completed an attention check, indicating the topic of the partner's email (which all participants passed) and a manipulation check (assessing perceived positivity/ negativity expressed; see OSM). Participants then wrote a reply email, which coders later rated for responsiveness. Although reply emails were in response to a hypothetical disclosure and were not sent to the partner, crafting a responsive reply required investing time and energy, similar to real-world responsive behavior. Participants completed questionnaires containing potential mechanism measures, and answered additional questions about their response, demographic information (age, ethnicity), and relationship (status, length, partner's gender).

Measures

Full materials are on OSF. Here, we describe measures relevant to the current hypotheses.

Potential Mechanisms. After participants wrote their reply email, they responded to items related to their thoughts and feelings about their partner, their partner's disclosure email, and their reply using 9-point response scales (unless otherwise noted, 1 = *strongly disagree*; 9 = *strongly agree*). (See OSF materials file for all items). We planned to combine items to create composites reflecting the mediators in Figure 1. Five items (α = .87) assessed efficacy beliefs (e.g., "I felt like we would be able to provide effective support to my partner"). Six items (α = .69) asked about participants' warm or compassionate feelings about their partner or their relationship (pro-relational sentiments; e.g., "I felt like my partner valued me and/or our relationship"). One item assessed positive mood: "Reading my partner's email made me feel an increase in positive emotion(s) (e.g., more inspiration, happiness, gratitude, hope, contentment than I felt before reading it)." Three items (α = .75) assessed need appraisals (e.g., "How upset is your partner about the conflict with his/her friend?"; 1 = *not at all*; 9 = *extremely*).

Responsiveness. Following data collection, three coders rated participants' reply emails for responsiveness, using seven items (α = .95, interrater α = .80; e.g., "How supportive is this response?"; 1 = *not at all*; 9 = *extremely*). Coders were unaware of hypotheses and participants' condition (for the full coding scheme, see OSF). Full study materials, SPSS syntax, and deidentified data required to replicate analyses are available on OSF.

Results

Prior to analyses, we excluded data from two participants who did not follow instructions for the response email task and 38 participants who did not write a response message.[8] Thus, the final sample comprised 333 participants (negativity-only condition n = 107, plus-positivity condition n = 115, plus-filler condition n = 111). A sensitivity analysis revealed a sample of 333 participants would be sufficient to detect a small overall condition effect (effect size f = 0.17) with 80% power (α = .05). Analyses using MedPower (Kenny, 2017) suggested that this sample size would allow us to detect a standardized indirect effect of .044 (with direct path β = .35—estimated based on Study 1's findings—and *a* and *b* path βs = .21) with 82-83% power (see OSM for details). Table 3 shows descriptive statistics and correlations for key variables.

Table 3
Descriptive Statistics and Correlations for Key Study Variables (Study 2)

	M	*SD*	*1*	*2*	*3*	*4*
1. Responsiveness	4.54	(1.31)	--			
2. Efficacy beliefs	7.55	(1.46)	.45***	--		
3. Pro-relational sentiments	6.63	(1.20)	.30***	.50***	--	
4. Positive mood	4.89	(2.37)	.04	.09	.31***	--
5. Need appraisal	6.84	(1.34)	.29***	.23***	.17**	-.08

Note. ***p < .001. **p < .01.

Direct Effect of Seeker Positivity on Responsiveness (Path I, Figure 1)

Table 4 displays results of an ANOVA testing the condition effects on responsiveness and descriptive statistics by condition. An overall condition effect emerged on responsiveness. Contrast tests showed that the plus-positivity condition email elicited more responsiveness than did the negativity-only condition email, $p = .015$. However, the plus-positivity condition did not significantly differ from the plus-filler condition, $p = .553$.[9] The negativity-only and plus-filler conditions did not differ in responsiveness, $p = .066$.

Indirect Effects of Seeker Positivity on Responsiveness

Next, we investigated mechanisms through which unitary positivity might influence provider responsiveness. We predicted that support-eliciting indirect effects would emerge via increased efficacy beliefs (Path A-B), strengthened pro-relational sentiments (Path C-D), and boosts in positive mood (Path E-F). We also hypothesized that a support-suppressing indirect effect would emerge via decreased need appraisals (Path G-H).

Condition Effects on Potential Mechanisms. We first examined the effects of condition on each potential mechanism variable in separate ANOVAs and used planned contrasts to evaluate which conditions differed from which other conditions. Table 4 displays results. Condition did not affect efficacy beliefs or pro-relational sentiments, but had some effects on positive mood and need appraisals (see Table 4). Although the omnibus test for positive mood was not significant, we proceeded with planned contrasts to test Path E in Figure 1. The plus-positivity condition did not differ from the negativity-only condition ($p = .096$) but did increase positive mood compared to the plus-filler condition ($p = .020$). Regarding the hypothesized support-suppressing mechanism, an overall effect of condition emerged on perceived need for support: The plus-positivity condition decreased perceived need compared to the negativity-only condition ($p = .001$) and compared to the plus-neutral condition ($p = .007$). In sum, the plus-

positivity condition decreased need appraisals compared to the negativity-only condition, and simultaneously decreased need appraisals and increased positive mood compared to the plus-filler condition. We retained these two variables (need appraisals and provider's positive mood) for mediation analyses.

Table 4
Effects of Condition on Participant (Provider) Responsiveness (Study 2)

	Plus-positivity	Negativity-only	Plus-filler	Test statistic		
Outcome	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*p*	η_p^2 [95% CI]
Responsiveness	4.71 (1.31)^{ab}	4.28 (1.29)^{bc}	4.61 (1.30)^{c}	3.23	.041	.019 [.000. .054]
Efficacy beliefs	7.51 (1.61)^{a}	7.51 (1.41)^{a}	7.63 (1.35)^{a}	0.24	.790	.001 [.000, .014]
PR sentiments	6.78 (1.26)^{a}	6.54 (1.14)^{a}	6.58 (1.18)^{a}	1.30	.273	.008 [.000, .033]
Positive mood	5.30 (2.32)^{a}	4.77 (2.21)^{ab}	4.57 (2.53)^{b}	2.94	.054	.018 [.000, .051]
Need appraisal	6.49 (1.31)^{a}	7.07 (1.29)^{b}	6.97 (1.37)^{b}	6.15	.002	.036 [.005, .080]

Note. PR sentiments = Pro-relational sentiments. Different letters within rows indicate conditions that significantly differ ($p < .05$) from each other.

Mediation Analyses. We ran mediation analyses in PROCESS (v3.5; Model 4; Hayes, 2017), examining indirect effects of the plus-positivity condition against the negativity-only and plus-filler conditions in separate models. As recommended by Yzerbyt et al. (2018), we report results for individual paths of the indirect pathway and an index of mediation drawn from PROCESS models using percentile bootstrap (with 5,000 resamples; see Table 5). Confidence intervals for indirect effects that exclude zero are consistent with mediation.

In a simple mediation model comparing the plus-positivity condition (dummy coded) against the negativity-only condition (reference category; see Figure 2), we tested the conceptual model's support-suppressing indirect pathway through decreased need appraisals. The plus-positivity condition (vs. negativity-only) condition decreased need appraisals ($p = .001$), and need appraisals was positively associated with responsiveness ($p < .001$). As expected, the

indirect effect of the plus-positivity condition via decreased perceived need was significant (see Table 5), such that positivity was indirectly related to less responsiveness.

We also tested indirect effects of the plus-positivity condition against the plus-filler condition (reference category), via positive mood and need appraisals in separate models. The model testing positive mood as a mediator showed no indirect effect of the plus-positivity condition on responsiveness (see Table 5). Although the plus-positivity (vs. plus-filler) condition increased positive mood ($p = .020$), positive mood did not predict responsiveness ($p = .530$). However, an indirect effect of the plus-positivity condition did emerge in the model testing need appraisals as a mediator (see Table 5).[10] As shown in Figure 3, the plus-positivity (vs. plus-filler) condition decreased need appraisals ($p = .007$), and need appraisals positively predicted responsiveness ($p < .001$). Thus, plus-positivity condition (vs. each control condition) was indirectly related to less responsiveness indirectly through its negative effect on need appraisals.

Table 5

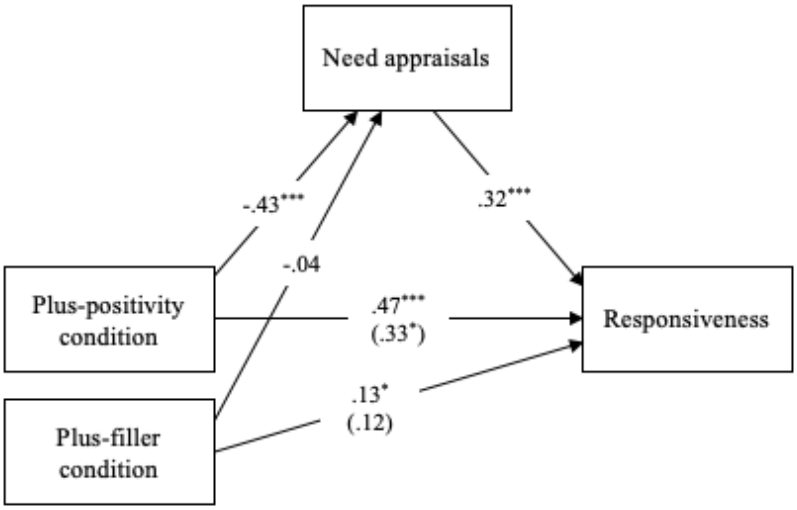
Results from Separate PROCESS Models Used to Test the Indirect Effects of Positive Expressivity on Provider Responsiveness (Study 3)

	X → M		M → Y		X → Y		Unstandardized indirect effect	
Mediator	*b* (*SE*)	β	*b* (*SE*)	β	*b* (*SE*)	β	*Effect* (*SE*)	95% CI
Reference category = Negativity-only condition								
Need appraisals								
Plus-posivity condition	**-0.58 (0.18)**	**-.43**	**0.61 (0.17)**	**.47**	**0.43 (0.18)**	**.33**	**-.182 (.06)**	**[-.315, -.065]**
Plus-filler condition	-0.10 (0.18)	-.04	**0.36 (0.17)**	**.13**	0.33 (0.18)	.12		
Need appraisals			**0.31 (0.05)**	**.32**				
Reference category = Plus-filler condition								
Positive mood								
Plus-posivity condition	**0.74 (0.31)**	**.31**	0.09 (0.18)	.07	0.10 (0.17)	.08	.014 (.03)	[-.038, .072]
Negativity-only condition	0.21 (0.32)	.04	-0.33 (0.18)	-.12	-0.33 (0.18)	-.12		
Positive mood			0.02 (0.03)	.04				
Need appraisals								
Plus-posivity condition	**-0.48 (0.18)**	**-.36**	0.25 (0.17)	.19	0.10 (0.17)	.08	**-.149 (.06)**	**[-.267, -.039]**
Negativity-only condition	0.10 (0.18)	.04	**-0.36 (0.17)**	**-.13**	-0.33 (0.18)	-.12		
Need appraisals			**0.31 (0.05)**	**.32**				

Note. Bolded values indicate significant paths. Confidence intervals that do not include the value 0 are considered statistically significant.

Figure 2

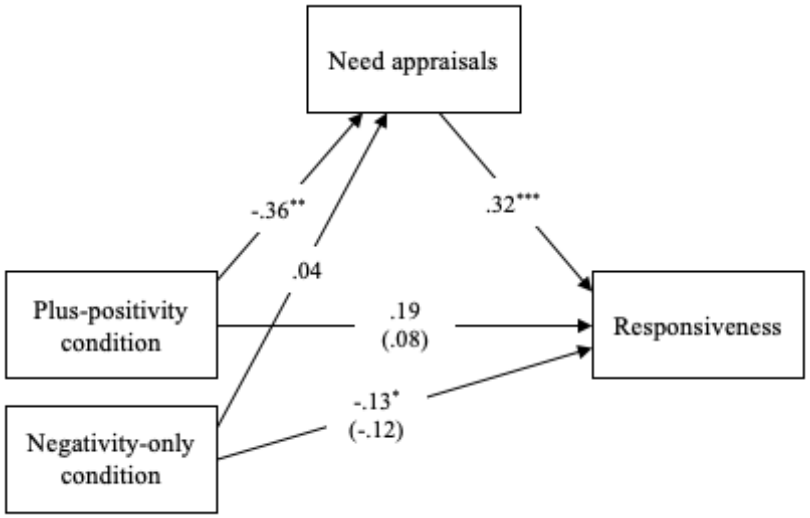
Simple Mediation Model Used to Test the Plus-Positivity Condition's Indirect Effect via Need Appraisals Against the Negativity-Only Condition (Study 2)



Note. N = 333. Path coefficients for condition effects are partially standardized and indicate condition effects compared to the negativity-only condition. The path coefficient for need appraisals is fully standardized. Values in parentheses are path coefficients when the mediators are excluded from the model. $^{***}p < .001$. $^{*}p < .05$.

Figure 3

Simple Mediation Model Used to Test the Plus-Positivity Condition's Indirect Effect via Need Appraisals Against the Plus-Filler Condition (Study 2)



Note. N = 333. Path coefficients for condition effects are partially standardized and indicate condition effects compared to the plus-filler condition. The path coefficients for need appraisals is fully standardized. Values in parentheses are path coefficients when the mediators are excluded from the model. $^{***}p < .001$. $^{**}p < .01$. $^{*}p < .05$.

In sum, these mediation findings provide strong support for the conceptual model's support-suppressing pathway via decreased need appraisals. However, we found no support for a support-eliciting pathwayvis efficacy beliefs, pro-relational sentiments, or positive mood.

Discussion

Study 2 provided causal evidence of a direct support-eliciting effect of seeker-expressed positivity on provider responsiveness (Path I, Figure 1): Experimentally-manipulated positive expressivity in a negative disclosure increased participants' (providers') responsiveness (as rated by coders) compared to a negativity-only condition (but not compared to a plus-filler condition).

Study 2 also provided initial evidence that expressing positivity in negative disclosures may affect providers in ways that both encourage and discourage responsive support. Although the aforementioned support-eliciting direct effect (Path I, Figure 1) of positivity emerged, a *support-suppressing* indirect effect (via decreased need appraisal) also emerged.

The lack of evidence for support-eliciting mechanisms for the observed positive (support-eliciting) direct effect may have been due to the positivity manipulation including multiple types of positivity. Our mechanism measures also included items that captured the constructs rather indirectly (e.g., "I was glad to have had the opportunity to help my partner with his/her situation" for pro-relational sentiments). Some involved just one item (e.g., positive mood). These factors may have decreased our chances of finding support for some indirect pathways. We sought to build on these findings in Study 3 by teasing apart the effects of different types of positivity. We examined direct effects of experimentally-manipulated partner-oriented positivity, stressor-oriented positivity, and unspecified positivity (i.e., separate type-specific positivity conditions) on provider responsiveness compared to a non-positivity condition and to a neutral-filler condition. We also investigated support-eliciting and support-suppressing mechanisms, aiming to improve measurement of pro-relational sentiments and positive mood variables from Study 2.

Study 3

Study 3 employed a similar experimental approach to Study 2, involving a between-groups manipulation of the content in a negative disclosure that participants imagined receiving from their romantic partner. Support-seeking conditions included negativity-only, plus-neutral, and plus-positivity conditions. However, we broke the plus-positivity condition from Study 2 into three positivity conditions, each containing a different type of positive expressivity: partner-oriented, stressor-oriented, or unspecified positivity.

After the manipulation, we assessed potential mechanisms and responsiveness using procedures from Study 2. Walsh and Forest (2021) speculated that partner-oriented positivity is likely toboost pro-relational sentiments and positive mood , with little risk of undermining need appraisals; that stressor-oriented positivity may bolster efficacy beliefs but also decrease need appraisals; and that unspecified positivity may increase pro-relational sentiments and positive mood but also decrease need appraisals. We tested these possibilities, but explored all possible pathways from positivity type to responsiveness. This study was not preregistered.

Method

Participants

We posted 500 study slots on the crowdsourcing platform, Prolific, intending to collect data from 100 participants in each of the five conditions. Although we intended to recruit a sample of participants with an exclusive romantic partner, six respondents reported being single, separated, non-exclusive, or uncertain about their relationship status. The remaining 494 participants (*M*age = 34.82 years, *SD* = 11.50; 56.3% women; 78.7% White, 7.9% Asian, 5.7%, Hispanic, 3.6% multiracial, 3.4% Black or African American, 0.4% American Indian or Alaska Native, 0.2% Middle Eastern) were exclusively dating (*n* = 95), cohabiting (*n* = 88), engaged (*n* = 34), married (*n* = 277). On average, participants had been with their partner for 9.27 years (*SD* = 9.70). Most participants (94.9%) were in mixed-gender relationships. Participants received $1.00 in appreciation for their participation. We report how we determined our sample size, all data exclusions, all manipulations, and all measures. (Measures used to test our hypotheses are described in text; see OSM for full materials).

Procedure

Participants completed all study tasks and questionnaires online, during a single session.

Participants first reported their gender. After completing background measures (see OSF for full materials), we manipulated the seeker's expression of positivity, using modified versions of emails used in Study 2 (see OSF). Each of the positivity condition emails included the negative content from the negativity-only condition email plus several statements exemplifying one particular type of positivity identified in Study 1: partner-oriented positivity (e.g., "Thanks for taking the time to read this! I'm lucky that I have you to share these things with."), stressor-oriented positivity (e.g., "We've been able to move past arguments that we've had before, so I'm hopeful that we can resolve this too."), or unspecified positivity (e.g., "Things are going great with work and I've been planning some fun activities for the weekend!").

Next, participants completed an attention check that required them to indicate the topic of the partner's email. Participants then wrote a response to their partner (which was not sent), completed measures assessing potential mechanisms, and answered questions about demographics (i.e., age, ethnicity), and about their relationship and partner (e.g., relationship status, length, and partner's gender).

Measures

Full materials are on OSF. Here, we describe measures relevant to the current hypotheses.

Potential Mechanisms. After participants wrote their reply email, they completed measures of potential mechanisms linking condition to responsiveness (see OSM for all items). Participants made their ratings on 9-point response scales ("Reading my partner's email made me feel:…; 1 = *strongly disagree*; 9 = *strongly agree*). Among these, three items (α = .80) assessed participants' efficacy beliefs (e.g., "confident in my ability to effectively help my partner"). Seven items (α = .84) assessed pro-relational sentiments (e.g., " fond of my partner").

Four items (α = .84) assessed positive mood (e.g., "happy"). One item assessed seeker's appraisal of the seeker's need for support ("concerned for my partner").

Responsiveness. Following data collection, three trained coders—who were unaware of hypotheses and participants' condition—independently rated reply emails for responsiveness, using seven items (e.g., "How supportive is this message?"; 1 = *none/not at all*; 9 = *extremely/a great* deal; see OSM for items). The coder-rated means were averaged across items to create a responsiveness composite (α = .94, interrater α = .87).

Full study materials, SPSS syntax, and deidentified data required to replicate analyses are available on OSF.

Results

Prior to analyses, we excluded data from seven participants who did not follow instructions for the response email or failed the manipulation check. One participant did not write a response email. Thus, the final sample comprised 486 participants (partner-oriented positivity condition n = 95; stressor-oriented positivity condition n = 100; unspecified positivity condition n = 93; negativity-only condition n = 99, plus-filler condition n = 99). A sensitivity analysis using G*power (Faul et al., 2009) revealed a sample of 486 participants would be sufficient to detect a small overall condition effect (effect size f = 0.16) with 80% power (α = .05). Power analyses using MedPower (Kenny, 2017) and estimating the direct path coefficients using Study 2's observed path estimates revealed that our sample size and condition breakdown positioned us to detect indirect effects of .044 to .048 (with a and b path coefficients of β = .21 - .22) with 82-84% power (α = .05; see OSM for details). Table 6 shows descriptive statistics and correlations for key study variables.

Table 6
Descriptive Statistics and Correlations for Key Study Variables (Study 3)

	M	*SD*	*1*	*2*	*3*	*4*	*5*
1. Responsiveness	5.33	(1.41)	--				
2. Efficacy beliefs	7.04	(1.59)	.18***	--			
3. PR sentiments	5.83	(1.53)	.28***	.42***	--		
4. Positive mood	3.62	(1.80)	.04	.20***	.59***	--	
5. Need appraisal	7.31	(1.69)	.37***	.26***	.39***	.01	--

Note. ***$p < .001$.

Type-Specific Direct Effects on Responsiveness

Table 7 displays results of an ANOVA testing the condition effects on responsiveness and descriptive statistics by condition. The ombinbus test revealed an overall effect of condition on responsiveness. Planned contrasts showed that the partner-oriented positivity condition increased responsiveness compared to the negativity-only condition ($p = .022$) and plus-filler condition ($p = .013$). In contrast, the stressor-oriented positivity condition did not differ from the negativity-only condition ($p = .108$) or plus-filler condition ($p = .074$). The unspecified positivity condition also did not differ from the negativity-only condition ($p = .588$) or plus-filler condition ($p = .716$). Pairwise comparisons between the three positivity conditions showed that the partner-oriented positivity and stressor-oriented positivity conditions, which did not differ from each other ($p = .472$), each increased responsiveness compared to the unspecified positivity condition (ps = .005 and .034, respectively). The negativity-only and plus-filler conditions did not differ in responsiveness ($p = .856$).

Table 7

Effects of Type-Specific Positivity Conditions on Responsiveness and Potential Mechanism Variables (Study 3)

Outcome	PO	SO	Uns	Neg-only	Plus-filler	Test statistic		
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*p*	ηp^2 [95% CI]
Responsiveness	5.66 (1.23)^{a}	5.52 (1.33)^{ab}	5.09 (1.32)^{c}	5.20 (1.56)^{bc}	5.16 (1.50)^{bc}	3.05	.017	.025 [.001, .051]
Efficacy beliefs	7.04 (1.54)^{a}	7.12 (1.50)^{a}	6.99 (1.80)^{a}	7.01 (1.51)^{a}	7.02 (1.60)^{a}	0.10	.981	.001 [.000, .000]
PR sentiments	6.28 (1.42)^{a}	5.99 (1.42)^{a}	5.93 (1.60)^{ac}	5.46 (1.44)^{b}	5.54 (1.64)^{bc}	4.92	<.001	.038 [.008, .072]
Positive mood	4.12 (1.85)^{a}	3.78 (1.64)^{ac}	4.01 (1.87)^{a}	2.90 (1.63)^{b}	3.36 (1.78)^{bc}	8.04	<.001	.062 [.022, .102]
Need appraisal	7.39 (1.57)^{ab}	7.19 (1.73)^{a}	7.08 (1.81)^{a}	7.62 (1.44)^{b}	7.20 (1.85)^{ab}	1.83	.122	.012 [.000, .036]

Note. PO = Partner-oriented positivity condition. SO = Stressor-oriented. Uns = Unspecified positivity. Neg-only = Negativity-only condition. PR sentiments = Pro-relational sentiments. Different letters within rows indicate conditions that significantly differ ($p < .05$) from each other.

Type-Specific Indirect Effects on Responsiveness

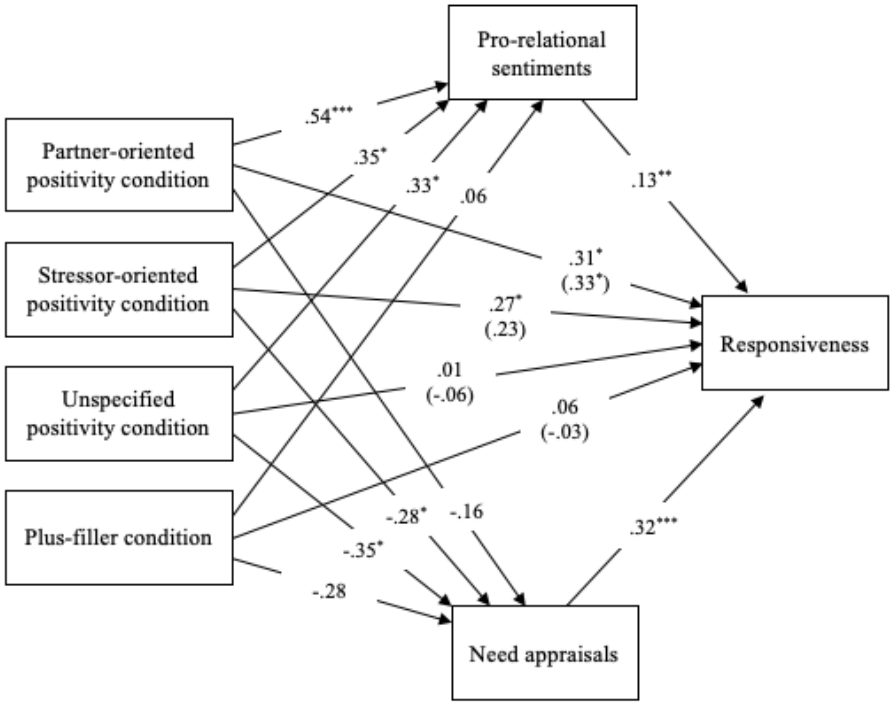
Condition Effects on Potential Mechanisms. As in Study 2, we first tested effects of condition on the potential mechanism variables in ANOVAs. As shown in Table 7, condition effects emerged on pro-relational sentiments, positive mood, and need appraisals. We used planned contrasts to identify specific condition differences in these potential mechanisms, comparing each plus-positivity (partner-oriented, stressor-oriented, and unspecified) condition to the negativity-only and plus-filler conditions. Compared to the negativity-only condition, partner-oriented condition, stressor-oriented condition, and unspecified condition increased pro-relational sentiments (ps < .05) and positive mood (ps < .001). The stressor-oriented and unspecified conditions each decreased need appraisals (ps = .047 and .016, respectively) compared to the negativity-only condition, but need appraisals did not differ between the partner-oriented and negativity-only conditions (p = .253). Compared to the plus-filler condition, participants reported higher levels of pro-relational sentiments in the partner-oriented (p < .001) and stressor-oriented conditions (p = .036), but not in the unspecified condition (p = .076). Lastly, positive mood in the partner-oriented condition (p = .003) and unspecified condition (p = .010) was significantly higher than in the plus-filler condition; but the stressor-oriented and plus-filler conditions did not differ (p = .096).

Mediation Analyses. We retained the mechanism variables on which condition differences emerged for mediation analyses (see Table 8 for results). In the first set of models, we tested indirect effects of each plus-positivity condition (dummy coded) against the negativity-only control condition (reference category). When each mechanism variable was entered into its own mediation model, indirect effects emerged through the pro-relational sentiments (for each plus-positivity condition) and through decreased need appraisals (for the stressor-oriented and

unspecified positivity conditions), but not through positive mood. Given that these indirect effect also emerged in a parallel mediation model and that the pattern of results for each of the indirect component paths remained unchanged across models, we report results from the fuller parallel model. See Table S6 in OSM for results from separate mediation models.

Figure 4

Parallel Mediation Model Used to Test Each Plus-Positivity's Indirect Effects via Pro-Relational Sentiments and Need Appraisals Against the Negativity-Only Condition (Study 3).



Note. N = 485. Path coefficients for condition are partially standardized and indicate condition effects compared to the negativity-only condition. Path coefficients for pro-relational sentiments and need appraisals are fully standardized. Values in parentheses are path coefficients when the mediators are excluded from the model (direct effect). $^{***}p < .001$. $^{**}p < .01$. $^{*}p < .05$.

Table 8

Results from a Parallel PROCESS Model Used to Test Each Plus-Positivity Condition's Indirect Effects via Pro-Relational Sentiments and Need Appraisals Against the Negativity-Only Condition

	Component paths				Unstandardized indirect effect					
	*X*s → M_1	*X* → M_2	*M*s → *Y*	*X*s → *Y*	Via PR sentiments			Via need appraisals		
Predictors	*b* (*SE*)	*b* (*SE*)	*b* (*SE*)	b (*SE*)	Effect	*SE*	95% CI	Effect	SE	95% CI
Plus-filler (X_1)	0.08 (0.21)	-0.47 (0.24)		-0.04 (0.20)	.010	.03	[-.048, .068]	-.123	.06	[-.246, .003]
PO (X_2)	**0.82 (0.22)**	-0.28 (0.24)		**0.46 (0.20)**	**.101**	.05	**[.023, .206]**	-.073	**.06**	[-.181, .042]
SO (X_3)	**0.53 (0.21)**	**-0.48 (0.24)**		0.32 (0.20)	**.065**	**.04**	**[.008, .144]**	**-.126**	**.06**	**[-.250, -.007]**
Uns (X_4)	**0.50 (0.22)**	**-0.59 (0.24)**		-0.08 (0.20)	**.062**	**.04**	**[.004, .147]**	**-.156**	**.06**	**[-.285, -.035]**
PR sentiments (M_1)			**0.12 (0.04)**							
Need appraisals (M_2)			**0.26 (0.04)**							

Note. PO = Partner-oriented positivity condition. SO = Stressor-oriented. Uns = Unspecified positivity. Neg-only = Negativity-only condition. PR sentiments = Pro-relational sentiments. Bolded values indicate significant paths. Confidence intervals that do not include the value 0 are considered statistically significant.

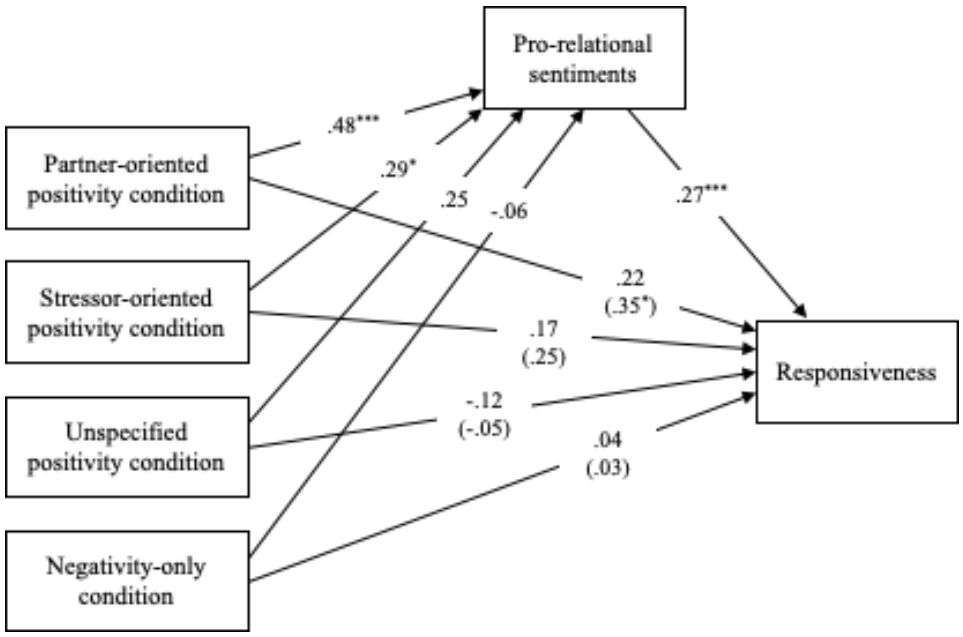
Figure 4 depicts the parallel mediation model with standardized path coefficients. When compared to the negativity-only condition, significant indirect effects through pro-relational sentiments emerged for each type-specific positivity condition. Specifically, partner-oriented positivity ($p < .001$), stressor-oriented positivity ($p = .013$), and unspecified positivity ($p = .021$) increased pro-relational sentiments, which in turn predicted more responsiveness ($p = .004$). In addition to the support-eliciting indirect effect via pro-relational sentiments, a simultaneous support-suppressing indirect effect via need appraisals also emerged for the stressor-oriented and unspecified positivity conditions. Compared to the negativity-only condition, stressor-oriented ($p = .047$) and unspecified positivity ($p = .016$) each decreased providers' perceived need, and need appraisals positively predicted responsiveness ($p < .001$). Thus, the partner-oriented positivity, stressor-oriented positivity, and unspecified positivity conditions condition were indirectly related to more responsiveness through increased pro-relational sentiments. But the stressor-oriented and unspecified positivity conditions were also indirectedly related to *less* responsiveness through decreased need appraisals.

In a second set of mediation analyses, we re-coded condition so that the plus-filler condition served as the reference category, and we tested indirect effects via pro-relational sentiments and via positive mood in separate models. Figure 5 depicts the final model with standardized path coefficients. Significant indirect effects via pro-relational sentiments emerged for the partner-oriented condition (indirect effect = .184, $SE = .066$, 95% CI = [.071, .326]) and the stressor-oriented condition (indirect effect = .112, $SE = .058$, 95% CI = [.004, .234]). Compared to the plus-filler condition, the partner-oriented condition increased pro-relational sentiments ($b = 0.74$, $SE = .22$, $p = .001$)—as did the stressor-oriented condition ($b = 0.45$, $SE = .21$, $p = .036$)—which in turn predicted more responsiveness, $b = 0.25$, $SE = .04$, $p < .001$. No

indirect effects via positive mood emerged in the partner-oriented positivity condition (indirect effect = .011, *SE* = .029, 95% CI = [-.044, .074]) or in the unspecified positivity condition (indirect effect = .009, *SE* = .026, 95% CI = [-.038, .069]. Although the partner-oriented and unspecified positivity conditions (vs. plus-filler condition) each increased positive mood (*b* = 0.76, *SE* = .25, *p* = .003, and *b* = 0.65, *SE* = .25, *p* = .010, respectively), positive mood did not predict responsiveness, *b* = 0.01, *SE* = .04, *p* = .700.

Figure 5

Simple Mediation Model Used to Test Each Plus-Positivity's Indirect Effects via Pro-Relational Sentiments Against the Plus-Filler Condition (Study 3)



Note. N = 485. Path coefficients for condition are partially standardized and indicate condition effects compared to the plus-filler condition. The path coefficient for pro-relational sentiments is fully standardized. Need appraisal is not included in the model, because no condition difference emerged in pairwise comparisons. $^{***}p < .001$. $^{*}p < .05$.

Discussion

Study 3's findings suggest that some types of positivity may hold more promise as support-elicitors than others—at least when expressed in the absence of other types of positivity. Partner-oriented positivity appeared to have the strongest support-eliciting effect, followed by stressor-oriented positivity, and unspecified positivity. Whereas support-eliciting indirect effects emerged for partner-oriented and stressor-oriented positivity types (via increased pro-relational sentiments), unspecified positivity appeared to indirectly shape support in both support-eliciting (via increased pro-relational sentiments) and support-suppressing (via decreased need appraisals) ways, such that the direct effect was washed out.

The findings from Study 3 provide causal evidence linking different positivity types to responsive support. They also lend insight into the mechanisms through which each positivity type may affect support quality. However, these findings were observed in the context of an imagined disclosure paradigm that used email as the medium of communication. This approach allowed us to retain tight control of the disclosure contents—and to create disclosure messages that include only one type of positivity—but these features may not reflect how close partners most often communicate about distressing events. Thus, in Study 4, we returned to a paradigm involving face-to-face live interactions between established romantic couples.

Study 4

Study 4 complements and extends Studies 1-3 several ways. First, we examined the capacity of seeker positive expressivity—as a broad unitary construct and type-specific dimensions—to predict provider responsiveness, over and above any effects of seeker negative expressivity. We did so in a non-student sample of more established romantic couples and using a naturalistic interaction paradigm that was higher in ecological validity than the video-exchange

paradigm employed in Study 1. Study 4 also provided another chance to examine common types and levels of seeker-expressed positivity. Second, we investigated potential mechanisms of the hypothesized positivity-responsiveness link, focusing on efficacy beliefs, pro-relational sentiments, and need appraisal. We expected that positivity as a unitary construct would have an indirect support-eliciting effect on provider responsiveness through efficacy beliefs and pro-relational sentiments, in addition to an indirect support-suppressing effect through need appraisal. We also conducted exploratory analyses for type-specific indirect effects, using the positivity types identified in Study 1 and experimentally manipulated in Study 3.

Building on Studies 1-3, we also examined whether positivity's effects on provider responsiveness (assessed up to this point through coder ratings) also extend to seekers' perceptions of providers' responsiveness. This is an important step given that responsiveness is primarily beneficial when recipients interpret to be so (e.g., Maisel & Gable, 2009; Reis & Shaver, 1988). Theory and research on perceived responsiveness suggests that perceptions of provider responsiveness should be shaped by responsive behaviors that providers enact (e.g., Hui et al., 2020; Reis & Shaver, 1988), but may also be subject to perceptual biases (e.g., Krueger & Forest, 2022; Lemay & Clark, 2015; Reis & Shaver, 1988). As such, we examined whether the expected link between seeker positivity and provider responsiveness (as rated by coders) extended to seekers' perceptions of provider responsiveness.[11]

Data for Study 4 were collected as part of a larger dyadic lab study, in which romantic couples discussed one member's (seeker's) greatest fear during a face-to-face interaction.[12] These interactions were recorded and subsequently coded on dimensions relevant to the current investigation. Although preliminary analyses had been conducted in this data set to provide pilot data for a grant submission, none of the full pre-registered models were tested prior to registering

our hypotheses and data analytic plan on OSF: https://osf.io/sn6xh/?view_only=ba1b808df2d94aadb25da74f71ec0740 (Note: The pre-registration appears on its own OSF page, different from that where study materials, syntax, and deidentified data are available).

Method

Participants

The sample (N = 206 adults; *M* age = 36.20, years, *SD* = 17.07) comprised 103 romantic couples (*M* relationship length = 122.13 months, *SD* = 163.10) recruited for a study on couples' communication. Sample size was determined by grant budget constraints. Advertisements appeared online (university research registry, Craigslist, Psychology Department Research Participation Pool) and on the [university] campus and surrounding community. Ninety-four couples were mixed-gender; nine were same-gender. Participants identified as White/Caucasian (68%), Black/African American (13%), Asian (10%), Hispanic (3%), Biracial/multiracial (3%), or listed Other/another identity (3%). Each participant received $25 or research credit for attending the lab session and a $5 e-gift card for completing the follow-up survey. We report how we determined our sample size, all data exclusions, all manipulations, and all measures. (Measures used to test our hypotheses are described in text; see OSF for full materials.)

Procedure

The couple's behavioral observation study included a 90–120-minute lab session (from which the measures relevant to the current analyses were drawn) and an online follow-up survey one year later (not used in the current investigation). During the lab session, couple members completed background questionnaires independently in separate rooms. They then reunited in a living room-style lab room, where they completed a videotaped Pictionary warm-up task.

Next, participants independently responded to pre-interaction questionnaires. Couple members were once again reunited in the observation lab for a 7-minute interaction task. One member of each couple was randomly assigned to the seeker role; the other was the provider. Seekers were asked to talk about "the thing in the world you are most afraid of." Fear topics (hereafter referred to as the "stressor") included, professional failure, personal or family health issues, and spiders. Providers were asked to respond in whatever way felt natural for them (for full instructions, see OSF materials). Couple members then completed post-interaction questionnaires, were debriefed, and compensated.

Measures

Full materials for the Study 4 lab session are available on OSF. Here, we describe only measures used in the current investigation.

Pre-interaction Questionnaires.

Individual Differences. Included in the background questionnaires for seekers and providers were measures that assessed trait self-esteem (10 items; seeker $\alpha = .92$; provider $\alpha = .90$; Rosenberg, 1965), attachment anxiety (6 items; seeker $\alpha = .72$; provider $\alpha = .69$) and avoidance (6 items; seeker $\alpha = .84$; provider $\alpha = .77$; ECR-Short Form; Wei et al., 2007), and relationship quality (6 items; seeker $\alpha = .87$; provider $\alpha = .78$; PRQC; Fletcher et al., 2000). We planned to run supplemental analyses including these measures as covariates.

Stressor Features. Seekers answered two questions within the pre-interaction questionnaire about the intensity of their fear of the target (stressor): "I feel really scared when we think about the target" and "I find the target extremely frightening" (1 = *strongly disagree*; 7 = *strongly agree*), $r(92) = .81$, $p < .001$. These items were averaged to create a seeker-reported stressor intensity composite ($M = 5.59$, $SD = 1.41$). Seekers answered additional questions about

the stressor, including the extent to which they had discussed it with their partner prior to their lab session: "How often have you talked to your partner about the target before?" (1 = *Never*; 4 = *Sometimes*; 7 = *Very frequently*; *M* = 4.36, *SD* = 1.68), which we used in supplemental models.

Post-Interaction Questionnaires. We used items from providers' post-interaction questionnaire to assess potential mechanisms linking seeker positivity to provider responsiveness (1 = S*trongly disagree;* 7 = S*trongly agree*). We also assessed seekers' perceptions of their partner's responsiveness during the support interaction (1 = *Not at all true*; 7 = *Completely true*).

***Provider Efficacy Beliefs*.** Three reverse-scored items that assessed the provider's expectations regarding their support efforts (e.g., "I felt like it was a waste of effort to try and support my partner because he/she will continue to have these fears") were averaged to create an efficacy beliefs composite (α = .75; *M* = 5.64, *SD* = 1.45).

***Provider Pro-relational Sentiments*.** Twelve items (α = .82) assessed provider pro-relational sentiments (e.g., "I felt like my partner deserved a very caring and supportive response"). Items were averaged to create a pro-relational sentiments composite (*M* = 5.48, *SD* = 0.89).

***Provider Appraisal of Seeker Need*.** Three items assessed the provider's understanding of how the seeker feels about the stressor (e.g., "My partner feels really scared when he/she thinks about the actual target").[13] We intended to combine these three items to create a need appraisal composite if they produced a reliable scale. However, a reliability analysis on the three items revealed low internal consistency (α = .41), and the corrected item-total correlation for (reverse-scored) "I felt like my partner did not need much support" (-.01) suggested that this item did not hang well with the other two items. The other two items ("My partner feels really scared when he/she thinks about the actual target" and "My partner finds the actual target extremely

frightening") were positively correlated, $r(95) = .72$, $p < .001$. We therefore created a 2-item need appraisal composite with these two highly-correlated items ($M = 5.25$, $SD = 1.42$).

Seeker Perceptions of Provider Responsiveness. Seekers completed a 13-item measure of perceived provider responsiveness in the conversation (e.g., "My partner understood me" and "My partner was responsive to my needs"; $\alpha = .94$; $M = 6.24$, $SD = 1.04$). Although not included in our pre-registered data analytic plan, we used this measure to examine whether the effects of seeker positivity on coder-rated responsiveness that we expected would extend to seekers' perceptions of responsiveness.

Observational Measures. Couples' videotaped interactions were coded on several dimensions, described below (for full coding scheme, see OSF). Coders were unaware of study hypotheses. Coders used 7-point response scales for all items (1 = *never/not at all*; 4 = *occasionally/somewhat*; 7 = *very frequently/very much*), answering the question, "To what extent did the [seeker/provider] do each of the following?"

Seeker Positivity. Three coders rated seeker behavior in the interaction videos. Coders rated eight specific expressions of positivity (e.g., "express affection for his/her partner verbally or nonverbally"). As in Study 1, we combined coders' ratings of these eight items to form a unitary positivity composite ($\alpha = .82$, interrater $\alpha = .82$). We also created positivity sub-composites that represent the three different types of positivity suggested by the PCA in Study 1 (and that we experimentally manipulated in Study 3): partner-oriented positivity, stressor-oriented positivity, and unspecified positivity. Four items assessed partner-oriented positivity (e.g., "express gratitude [e.g., *Thank his/her partner for listening to or supporting him/her*]"; "express affection for his/her partner verbally or nonverbally"; $\alpha = .88$; interrater $\alpha = .82$), two items assessed stressor-oriented positivity ("express optimism about the fear" and "find a 'silver

lining' or good thing that has resulted from the fear"; $r[95] = .35$, $p < .001$; interrater $\alpha = .53$), and two items assessed unspecified positivity ("express happiness"; "use humor to try to lighten the mood"; $r[95] = .70$, $p < .001$; interrater $\alpha = .80$).

Seeker Negativity. The same coders who rated positivity also rated the extent to which seekers expressed fear, anxiety, sadness, and anger (see OSF for full coding scheme). Consistent with our approach for assessing positive expressivity as a unitary construct and following our pre-registered analysis plan, we intended to combine coders' ratings of these four specific negative expressions to create a unitary negativity composite, as long as these items formed an internally consistent measure of negative expressivity. Expressed anger did not hang well with the other negative expressivity items (for internal consistency results, see OSM). The anger item was therefore omitted from the final 3-item seeker negativity composite (interrater $\alpha = .79$).

Provider Responsiveness. Three coders different from those who rated seeker behavior rated provider behavior in the interaction videos. Nine coder-rated items assessing responsiveness (e.g., "Behave supportively" and "Be responsive to his/her partner's needs") were averaged to create a responsiveness composite ($\alpha = .96$; interrater $\alpha = .91$; $M = 5.38$, $SD = 1.16$).

Full study materials, SPSS syntax, and deidentified data required to replicate analyses are available on OSF.

Results

Analyses excluded data from one couple who had difficulty staying alert in the lab session. Video data from six couples were lost due to technological failure. Thus, analyses included data from 96 couples. A sensitivity analysis indicated a sample of 96 would be sufficient to detect a small-to-medium effect ($f^2 = 0.08$) for the link between seeker positive expressivity and provider responsiveness in a model that also included negativity as a predictor

with 80% power (α = .05). Analyses using MedPower (Kenny, 2017) revealed that a sample of 96 would allow us to detect indirect effects of .10 (with *a* and *b* paths of β = .31) with 80% power (α = .05), assuming a direct effect of β = .35 (estimate based on Study 1's findings).

Seeker's Expression of Negativity and Positivity

Seekers expressed a moderate amount of negativity in support discussions with their partner (*M* = 3.23 on a 7-point scale; *SD* = 1.05) and reported that their stressor was relatively intense (*M* = 5.59 on a 7-point scale, *SD* = 1.41). More than three-quarters (79.2%) of seekers expressed at least some positivity, as indicated by positivity composite scores ≥ 2 on a 7-point scale (*M* = 2.78, *SD* = 0.83). The majority of seekers expressed some partner-oriented positivity (84.4%) and/or some unspecified positivity (81.3%). Stressor-oriented positivity was less common (14.6%). Partner-oriented positivity was positively correlated with stressor-oriented positivity (*r*[94 = .25, *p* = .016) and unspecified positivity, *r*(94) = .43, *p* < .001. Stressor-oriented and unspecified positivity were unrelated, *r*(94) = .15, *p* = .149. Table S7 in OSM displays descriptive statistics and bivariate correlations for the negativity and positivity composites and items. For correlations between unitary negativity and positivity, type-specific positivity sub-composites, and key features of the stressor, seeker, or provider, see Table S8.

Main Analyses

Positivity as a Unitary Construct.

Direct Path from the Positivity Composite to Coder-rated Responsiveness (Path I).

Table 9 (Model 1) shows results from a regression model predicting provider responsiveness from the positivity composite and negativity.[6] As expected, a main effect of the positivity composite emerged: Seekers who expressed more (vs. less) positivity received more responsive support from providers, β = .60, sr^2 = .36. A main effect of the negativity composite also

emerged: Seekers who expressed more (vs. less) negativity received more responsive support, β = .31, sr^2 = .09 (see Table 8, Model 1). The Positivity × Negativity interaction effect (entered on Block 2) was not significant, p = .524.

We ran supplemental models intended to rule out potential third variables (stressor intensity; frequency of past discussions about the fear; seeker self-esteem, attachment anxiety, attachment avoidance, and relationship quality; and the same set of features of the provider; see Table S9 in OSM). The positivity composite continued to (positively) predict provider responsiveness even when accounting for negativity and potential third variables. (See OSM for exploratory moderation analyses involving the positivity composite).

Table 9
Results from Main Regression Models Predicting Coder-Rated Provider Responsiveness from Positivity and Negativity (Study 4)

	b	*SE*	95% CI	*t*	*p*
Model 1					
Positivity composite	0.85	0.11	[0.63, 1.07]	7.63	<.001
Negativity composite	0.34	0.09	[0.16, 0.51]	3.87	<.001
Model statistics			R^2 = .42, $F(2, 93)$ = 34.02, p <. 001		
Model 2					
Partner-oriented positivity	0.63	0.08	[0.47, 0.78]	8.16	<.001
Negativity composite	0.19	0.09	[0.03, 0.36]	2.28	.025
Model statistics			R^2 = .45, $F(2, 93)$ = 38.50, p <. 001		
Model 3					
Stressor-oriented positivity	0.56	0.17	[0.22, 0.90]	3.30	.001
Negativity composite	0.28	0.11	[0.07, 0.49]	2.65	.010
Model statistics			R^2 = .16, $F(2, 93)$ = 8.83, p <. 001		
Model 4					
Unspecified positivity	0.30	0.10	[0.10, 0.49]	3.04	.003
Negativity composite	0.44	0.12	[0.20, 0.67]	3.68	<.001
Model statistics			R^2 = .15, $F(2, 93)$ = 7.96, p <. 001		
Model 5					
Partner-oriented postivity	0.62	0.09	[0.44, 0.81]	6.81	<.001
Stressor-oriented postivity	0.30	0.14	[0.03, 0.58]	2.18	.032
Unspecified positivity	-0.07	0.09	[-0.26, 0.11]	-0.80	.427
Negativity composite	0.16	0.10	[-0.04, 0.36]	1.56	.124
Model statistics			R^2 = .48, $F(4, 91)$ = 21.25, p < .001		

Note. Regression coefficients (*b*) are unstandardized; standardized coefficients are reported in text.

Indirect Pathways from the Positivity Composite to Coder-rated Responsiveness. We conducted mediation analyses in PROCESS (Model 4; Hayes, 2017) to test the conceptual model's support-eliciting indirect pathways through efficacy beliefs and pro-relational sentiments (Paths A-B and C-D in Figure 1), and its support-suppressing pathway through need appraisals (Paths G-H in Figure 1). Table 10 lists results from these models.

The first set of mediation analyses tested indirect effects via efficacy beliefs, pro-relational sentiments, and need appraisals in separate process models with seeker negativity as a covariate. The positivity composite predicted heightened provider efficacy beliefs ($p < .001$), and provider efficacy beliefs positively predicted partner responsiveness ($p = .044$), but the indirect effect via efficacy beliefs was not significant. A significant indirect effect of the positivity composite on responsiveness did emerge through pro-relational sentiments: When seekers expressed more (vs. less) positivity, providers reported heightened pro-relational sentiments ($p < .001$), which in turn predicted more responsiveness from providers ($p < .001$). No indirect effects via the need composite emerged, and no individual component path of the indirect pathway was significant (see Table 10). Thus, mediation analyses provided evidence for only the hypothesized support-eliciting mechanism via pro-relational sentiments (Paths C-D, Figure 1).

Table 10

Results from Separate PROCESS Models Used to Test the Indirect Effects of Positive Expressivity on Coder-Rated Provider Responsiveness when Controlling for Negativity (Study 4)

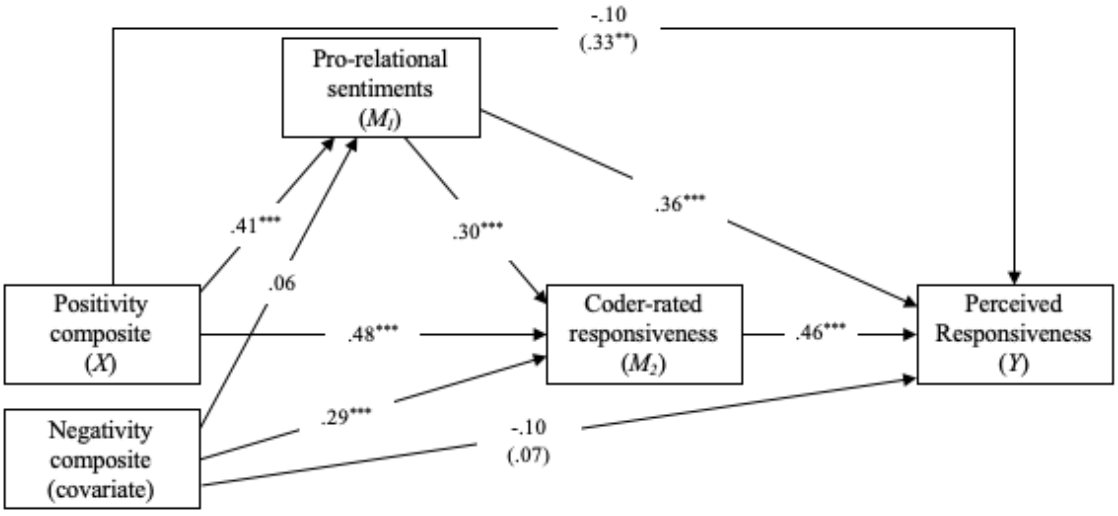
	X → *M*		*M* → *Y*		*X* → *Y*		Unstandardized indirect effect	
Mediator	*b* (*SE*)	β	*b* (*SE*)	β	*b* (*SE*)	β	*Effect* (*SE*)	95% CI
Positivity composite models								
Efficacy beliefs	**0.71 (0.17)**	.41	**0.14 (0.07)**	**.18**	**0.75 (0.12)**	**.53**	.100 (.06)	[-.003, .242]
PR sentiments	**0.44 (0.10)**	**.41**	**0.39 (0.11)**	**.30**	**0.68 (0.11)**	**.48**	**.170 (.07)**	**[.035, .326]**
Need appraisals	0.12 (0.18)	.07	0.05 (0.07)	.06	**0.84 (0.11)**	**.60**	.005 (.02)	[-.027, .045]
PO positivity models								
Efficacy beliefs	**0.46 (0.12)**	**.37**	**0.15 (0.07)**	**.18**	**0.56 (0.08)**	**.56**	**.068 (.04)**	**[.005, .164]**
PR sentiments	**0.35 (0.07)**	**.45**	**0.35 (0.11)**	**.27**	**0.51 (0.08)**	**.51**	**.120 (.06)**	**[.006, .228]**
Need appraisals	0.06 (0.13)	.05	0.05 (0.06)	.07	**0.62 (0.08)**	**.63**	.003 (.01)	[-.018, .029]
SO positivity models								
Efficacy beliefs	**0.60 (0.22)**	**.27**	**0.27 (0.08)**	**.33**	**0.40 (0.17)**	**.22**	**.161 (.08)**	**[.050, .364]**
PR sentiments	0.04 (0.14)	.03	**0.63 (0.11)**	**.48**	**0.54 (0.15)**	**.30**	.026 (.13)	[-.120, .382]
Need appraisals	-0.13 (0.23)	-.06	0.10 (0.08)	.12	**0.57 (0.17)**	**.32**	-.012 (.04)	[-.094, .091]
Uns positivity models								
Efficacy beliefs	**0.34 (0.13)**	**.30**	**0.27 (0.08)**	**.34**	**0.21 (0.10)**	**.23**	**.093 (.05)**	**[.017, .193]**
PR sentiments	**0.19 (0.08)**	**.27**	**0.58 (0.11)**	**.45**	**0.19 (0.09)**	**.21**	**.110 (.06)**	**[.001, .234]**
Need appraisals	0.16 (0.13)	.14	0.05 (0.08)	.06	**0.29 (0.10)**	**.32**	.008 (.02)	[-.030, .054]

Note. PO positivity = Partner-oriented positivity. SO positivity = Stressor-oriented positivity. Uns positivity = Unspecified positivity. PR sentiments = Pro-relational sentiments. All models control for seeker-expressed negativity on paths *X* → *M*, *M* → *Y*, and *X* → *Y*. Bolded values indicate significant paths. Confidence intervals that do not include the value 0 are considered statistically significant.

Indirect Pathways from the Positivity Composite to Seeker's Perceived Responsiveness. Going beyond our pre-registered hypotheses and analytic plan, we also examined whether coder-rated responsiveness translated seekers' perceptions of responeiveness. Coder-rated and seeker-perceived provider responsiveness were positively correlated, r (93) = .55, $p < .001$. We tested the serial mediation model (Model 6; Hayes 2017) depicted in Figure 6 to test the indirect effect of the positivity composite (X) on perceived responsiveness (Y) through pro-relational sentiments (M_1) and coder-rated responsiveness (M_2), in that order. As shown in Figure 6, when seekers expressed more (vs. less) positivity, providers felt stronger pro-relational sentiments (b = 0.44, SE = 0.10, $p < .001$), which in turn was associated with more provider responsiveness according to coders (b = 0.39, SE = 0.11, $p < .001$); and when providers behaved more responsively, seekers reported higher levels of perceived responsiveness (b = 0.41, SE = 0.10, $p < .001$). The indirect effect was significant, unstandardized effect = .068, SE = .04, 95% CI = [.009, .151]. This pattern of results is consistent with past theory and empirical evidence that observable responsive behaviors translate to recipient's (seeker's) perceived responsiveness.

Figure 6

Serial Mediation Model Used to Test the Indirect Effect of the Positivity Composite on Seeker's Perceived Responsiveness via Provider Pro-Relational Sentiments and Coder-Rated Responsiveness When Controlling for Negativity



Note. N = 95. Path coefficients are fully standardized. Values in parentheses are regression coefficients when the mediators are excluded from the model. $^{***}p < .001$. $^{**}p < .01$.

Different Types of Positivity.

Direct Links from Type-specific Sub-composites to Coder-rated Responsiveness (Path I). Returning to our pre-registered analysis plan (which focused on coder-rated responsiveness), we examined how different types of positivity were related to responsiveness. We regressed coder-rated provider responsiveness on each type-specific positivity sub-composite (partner-oriented positivity, stressor-oriented positivity, and unspecified positivity). These models controlled for negativity. As shown in Table 9 (Models 2-4), when sub-composites were entered in separate models, each type of positivity and negativity significantly predicted provider responsiveness. Consistent with the support-eliciting direct path linking seeker positivity to provider responsiveness (Path I, Figure 1), main effects of each positivity sub-composite predictor emerged: partner-oriented positivity, β = .63, sr^2 = .39; stressor-oriented positivity, β =

.31, sr^2 = .10; unspecified positivity, β = .33, sr^2 = .08. That is, when seekers expressed more (vs. less) partner-oriented positivity, stressor-oriented positivity, or unspecified positivity, providers behaved more responsively. A positive main effect of the negativity predictor also emerged in each type-specific sub-composite model, indicating that when seekers expressed more (vs. less) negativity, providers behaved more responsively (see Table 9). None of the type-specific sub-composite predictors interacted with negativity to predict responsiveness (*p*s > .152).

To rule out potential third variables, we tested supplemental models, in which we entered (in separate models) an additional covariate (see Table S10 in OSM). The positive main effects of the partner-oriented positivity and stressor-oriented positivity predictors held across all nine models that controlled for stressor intensity, seeker-reported past discussion of the fear, or for seeker or provider self-esteem, attachment anxiety, attachment avoidance, or relationship quality. The positive main effect of the unspecified positivity predictor held in nine of the 10 supplemental models. The positive main effect of the negativity predictor held in all 10 supplemental models. (See OSM for exploratory moderation analyses involving positivity types.)

We next examined partner-oriented positivity, stressor-oriented positivity, unspecified positivity, and negativity as simultaneous predictors of provider responsiveness. As shown in Table 9 (Model 5), partner-oriented positivity (β = .63, sr^2 = .26) and stressor-oriented positivity (β = .17, sr^2 = .03) each emerged as significant positive predictors of provider responsiveness. In contrast, unspecified positivity no longer significantly predicted responsiveness. (For results from a model that also tested interaction effects between positivity types, see OSM.)

Indirect Pathways from Type-specific Sub-composites to Coder-rated Responsiveness. We conducted mediation analyses in PROCESS (Model 4; Hayes, 2017) to investigate type-specific indirect pathways through efficacy beliefs, pro-relational sentiments, and need appraisal.

We entered partner-oriented positivity, stressor-oriented positivity, and unspecified positivity in separate models, and controlled for negativity across models (see Table 10 for results).

When mediators were entered in separate models, significant indirect effects through efficacy beliefs emerged in the partner-oriented, stressor-oriented, and unspecified positivity models, suggesting mediation that is consistent with Paths A-B of the conceptual model (see Figure 1). Specifically, when seekers expressed more (vs. less) partner-oriented positivity, stressor-oriented positivity, or unspecified positivity, providers reported higher efficacy beliefs (ps < .01), which in turn was associated with greater responsiveness from providers (ps < .05). A significant indirect effect through increased pro-relational sentiments also emerged in the partner-oriented and unspecified positivity models, but not in the stressor-oriented model (see Table 10). Consistent with the conceptual model's support-eliciting pathway via strengthened pro-relational sentiments (Paths C-D, Figure 1), when seekers expressed more (vs. less) partner-oriented positivity or unspecified positivity, providers experienced stronger pro-relationship sentiments (p < .001), which in turn predicted greater responsiveness (p = .003).

We also tested parallel mediation models for partner-oriented and unspecified positivity models, entering efficacy beliefs and pro-relational sentiments in the same model as simultaneous mediators and continuing to control for negativity. In the partner-oriented model, neither indirect effect emerged when both mechanisms were entered together. In the unspecified positivity model, the indirect effect via pro-relational remained significant (see Table S11 in OSM for full results).[14]

Discussion

In Study 4, seekers spontaneously expressed both positivity and negativity when talking to their romantic partner about their greatest fear. Further, seekers' expressions of positivity and negativity independently predicted their partner's responsiveness. The main effect of unitary positivity held when negativity and third variables were controlled. Taken together, these findings strongly support for the direct path in the conceptual model (Path I, Figure 1). Importantly, the heightened responsiveness that coders saw when seekers expressed more (vs. less) positivity also translated to seekers perceiving greater responsiveness.

Study 4 also provided some evidence highlighting the mediating role of pro-relational sentiments (Paths C-D in Figure 1). Whereas Study 2 showed only a support-suppressing indirect effect via decreased need appraisals, the present study's findings supporting only relational sentiments as a mediator may have been due to measurement differences. The pro-relational sentiments items in the current study (e.g., "I felt like my partner deserved a very caring and supportive response") were more directly relevant to support provision than the items used in Study 2 (e.g., "I felt like my partner valued me and/or our relationship"). Pro-relational sentiments may also drive provider behavior more in synchronous, face-to-face interactions than in asynchronous, mediated contexts. (For additional discussion of similarities and differences between Study 5 findings and prior studies' findings, see OSM.)

Finally, Study 4 revealed that partner-oriented positivity and stressor-oriented positivity emerged as the strongest and most robust predictors of responsiveness, whereas unspecified positivity was a relatively poor predictor of responsiveness. We summarize and discuss effects of positivity types in the General Discussion.

General Discussion

The current work investigated the phenomenon of expressing positivity when disclosing about personal stressors to one's romantic partner. Although existing evidence suggested that people can and often do express positive thoughts and feelings when talking to close others in times of distress, whether and why such positive expressivity affects support processes had not been systematically investigated (see Walsh & Forest, 2021). We aimed to address these gaps.

Our behavioral observation studies revealed that most people expressed some positivity, unprompted—albeit at relatively low levels—when talking about a recent upsetting event (Study 1) or their greatest fear (Study 4). The most commonly-expressed types of positivity varied by study (pleasant demeanor and optimism in Study 1; love for and affection toward the partner in Study 4), suggesting that contextual features may shape the types of positivity that people spontaneously express. The specific positive expressions that seekers exhibited mapped on fairly well to three subtypes of positivity proposed in recent theoretical work on positive expressivity as a support-seeking behavior (Walsh & Forest, 2021): partner-oriented, stressor-oriented, and unspecified positivity (called "incidental positivity" by Walsh and Forest, 2021).

We additionally examined the direct path from seeker positivity (as a unitary construct) to provider responsiveness (Path I, Figure 1), and the direct paths from different types of positivity to provider responsiveness. Table 11 summarizes evidence regarding the direct path from positivity (unitary positivity and subtypes) to responsiveness across studies. As can be seen in Table 11, we found converging evidence for a support-eliciting effect of seeker-expressed positivity in negative disclosures across two behavioral observation studies (Studies 1 and 4) and two experiments (Studies 2 and 3). In Studies 1 and 4, unitary measures of coder-rated seeker-expressed positivity were robust positive predictors of provider responsiveness, even when controlling for seeker-expressed negativity and potential third variables. Moreover,

experimentally-manipulated (unitary) positivity had a direct support-eliciting effect compared to a negativity-only condition (Study 2). Thus, there appears to be an overall positive (or support-eliciting) effect of positive expressivity on responsiveness. Furthermore, positivity's links with coder-rated responsiveness appear to translate to seeker perceptions of responsiveness: In Study 4, seeker positivity not only predicted increased coder-rated responsiveness but also seeker perceptions of responsiveness. Thus, expressing positivity may help seekers elicit the responsive support that predicts increased personal and relational well-being (Maisel & Gable, 2009).

Table 11
Summary of Findings Involve the Direct Path from Positivity to Coder-Rated Responsiveness Across Studies

	Unitary		PO		SO		Uns	
Controlling for potential third variables	S1	S4	S1	S4	S1	S4	S1	S4
Negativity	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and stressor intensity	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and seeker-reported depth and frequency of past disclosure	—	(+)	—	(+)	—	(+)	—	(+)
Negativity and seeker self-esteem	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and seeker anxiety	(+, +)	(+)	(*ns*)	(+)	(+)	(+)	(+)	(+)
Negativity and seeker avoidance	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and seeker PRQC	(+, +)	(+)	(*ns*)	(+)	(+)	(+)	(+)	(+)
Negativity and provider self-esteem	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and provider anxiety	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and provider avoidance	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
Negativity and provider PRQC	(+, +)	(+)	(+)	(+)	(+)	(+)	(+)	(*ns*)
Negativity and other types of positivity	—	(+)	(*ns*)	(+)	(+)	(+)	(+)	(*ns*)
Effects of plus-positivity conditions	S2		S3		S3		S3	
Compared to a negativity-only condition	(*ns*)		(+)		(*ns*)		(*ns*)	
Compared to a plus-filler condition	(+)		(+)		(*ns*)		(*ns*)	

Notes. S1 = Study 1. S2 = Study 2. S3 = Study 3. S4 = Study 4. PO = Partner-oriented positivity. SO = Stressor-oriented positivity. Uns = Unspecified positivity. PRQC = Perceived relationship quality components. Em dashes (—) indicate untested paths. In Study 1, analyses also controlled for

condition. Study 1 includes two sets of unitary positivity findings because both single-item positivity and the unitary composite were tested as separate measures. Signs in parentheses indicate the direction of the association/effect. *ns* = not significant.

We also considered different types of positivity. Taking stock of the direct effects (see Table 11), results from Studies 1, 3, and 4 provide compelling evidence that each type of positivity may be valuable in distress-related support-seeking contexts. Which was the most effective at eliciting support? We found the clearest evidence of partner-oriented positivity's value as a support-seeking behavior across studies using both observational (Studies 1 and 4) and experimental (Study 3) paradigms. This effect was largely robust, typically persisting when we entered plausible third variables as competing predictors. In Study 1, partner-oriented positivity's links to responsiveness did become nonsignificant in three of 10 tests involving competing predictors beyond negativity. We suspect that Study 1 may represent a context in which partner-oriented positivity's effects may appear weaker than they often are, because the video-message exchange procedure results in low levels of this positivity type (and because partner-oriented positivity may be more impactful when delivered in person). Yet, in studies in which partner-oriented positivity seemed to be most present (Studies 3 and 4) evidence for the support-eliciting value of partner-oriented positivity was especially strong.

Evidence for stressor-oriented positivity's value as a support-seeking behavior was also considerable, especially in observational studies (Studies 1 and 4; see Table 11): Stressor-oriented positivity's effects persisted when controlling for potential third variables and other types of positivity as well as negativity. Although we found no direct effect of stressor-oriented positivity on responsiveess in experimental work (Study 3), there was an indirect support-eliciting effect, which we describe shortly. Future work should continue to consider stressor-oriented positivity's effects, emphasizing experimental paradigms to permit causal conclusions.

Table 12
Summary of Findings Involving the Indirect Pathways from Positivity to Coder-Rated Responsiveness Across Studies

	Positivity			
Mediator	Unitary	PO	SO	Uns
Efficacy beliefs				
Compared to a neg-only condition (S2 or S3)	*ns*	*ns*	*ns*	*ns*
Compared to a plus-filler condition (S2 or S3)	*ns*	*ns*	*ns*	*ns*
Controlling for negativity (S4)	*ns*	(+)	(+)	(+)
Pro-relational sentiments				
Compared to a neg-only condition (S2 or S3)	*ns*	(+)	(+)	(+)
Compared to a plus-filler condition (S2 or S3)	*ns*	(+)	(+)	*ns*
Controlling for negativity (S4)	(+)	(+)	*ns*	(+)
Positive mood				
Compared to a neg-only condition (S2 or S3)	*ns*	*ns*	*ns*	*ns*
Compared to a plus-filler condition (S2 or S3)	*ns*	*ns*	*ns*	*ns*
Controlling for negativity (S4)	—	—	—	—
Need appraisal				
Compared to a neg-only condition (S2 or S3)	(-)	*ns*	(-)	(-)
Compared to a plus-filler condition (S2 or S3)	(-)	*ns*	*ns*	*ns*
Controlling for negativity (S4)	*ns*	*ns*	*ns*	*ns*

Notes. S2 = Study 2. S3 = Study 3. S4 = Study 4. PO = Partner-oriented positivity. SO = Stressor-oriented positivity. Uns = Unspecified positivity. Neg-only = Negativity-only. Em dashes (—) indicate untested pathways. Signs in parentheses indicate the direction of the association/effect. *ns* = not significant. Study 2 tested indirect pathways for unitary positivity; Study 3 tested indirect pathways for type-specific positivity conditions.

Our studies also suggest that unspecified positivity may have value as a support-seeking behavior, although the evidence was somewhat weaker than for the other types (See Table 11). On one hand, spontaneously-expressed unspecified positivity was a robust predictor of provider responsiveness in Study 1, persisting even when other positivity types were entered as competing predictors. Further, unspecified positivity indirectly predicted provider responsiveness in the support-eliciting direction in Studies 3 and 4 (described shortly). On the other hand, evidence of unspecified positivity's unique predictive value for provider responsiveness was limited in Study

4 (as its associations with responsiveness became nonsignificant when other positivity types were simultaneously considered). Experimentally-manipulated unspecified positivity had no direct effect on responsiveness in Study 3. Thus, unspecified positivity may have support-eliciting potential, but its value appears more limited or context-dependent than other types.

Taken together, these findings support the proposal from earlier theoretical work (Walsh & Forest, 2021) that partner-oriented, stressor-oriented, and unspecified positivity each have the potential to elicit support, although some types may be more likely to do so than others. It is noteworthy that we found no evidence that any type of positivity backfired, given that scholars have previously reasoned that some forms of positivity (e.g, stressor-oriented positivity) could undermine provider support by diminishing providers' need appraisals (Walsh & Forest, 2021). Future research that examines the extent of each type of positivity's support-eliciting potential and the conditions under which different types of positivity are especially (un)likely to elicit responsiveness is an important next step.

The current work also provided evidence regarding support-eliciting and support-suppressing mechanisms through which seeker positivity can affect provider responsiveness. Table 12 summarizes our findings regarding indirect pathways. Among the support-eliciting pathways, we found the clearest evidence for the mediating role of pro-relational sentiments (Path C-D in Figure 1), especially for partner-oriented positivity's effects: There was consistent evidence in both the experiment (Study 3) and the observational study (Study 4) that tested this mediational pathway. In Study 3, we also found consistent support for an indirect pathway through pro-relational sentiments for stressor-oriented positivity (compared to both no-positivity conditions) and some support for an indirect pathway through pro-relaitonal sentiments for

unspecified positivity. Additionally, pro-relational sentiments mediated unitary positivity's and unspecified positivity's effects on responsiveness in Study 4.

Evidence for the mediating role of efficacy beliefs (Path A-B in Figure 1) emerged but only in Study 4: Each positivity subtype (partner-oriented, stressor-oriented, and unspecified) was indirectly related to more coder-rated responsiveness through provider efficacy beliefs. The experimental manipulations of positivity did not affect provider efficacy beliefs, although efficacy beliefs were positively related to responsiveness (Studies 2 and 3). This pattern may indicate that positivity is more tightly linked to provider efficacy beliefs in interaction contexts that allow providers to receive real-time feedback about how seekers are receiveing their support attempts (e.g., through seeker expressions of gratitude, happiness, humor use).

These studies yielded no evidence for the mediating role of positive mood (Path E-F in Figure 1; see Table 12). Although positivity condtion affected providers' mood, provider mood was not linked to provider responsiveness in either study assessing this link (Studies 2 and 3). However, both studies assessing mood used email exchange paradigms. It will be important that future work assess the mood pathway in live interaction contexts where providers' positive mood may manifest in nonverbal displays of warmth not captured by written text responses.

Considering the support-suppressing pathway (via need appraisals), both experiments provided evidence that positivity can decrease need appraisals, and that low need appraisals in turn predict decreased responsiveness (Path G-H in Figure 1). Decreased need appraisals mediated an indirect support-suppressing effect of the plus-positivity condition (vs. the negativity-only condition and the plus-filler condition) on responsiveness in Study 2, and mediated indirect support-suppressing effects of the unspecified positivity condition and stressor-oriented positivity condition (vs. negativity-only condition) on responsiveness in Study 3.

However, direct effects of positivity conditions on responsiveness were either support-eliciting (Study 2) or nonsignificant (Study 3). This may be because seekers' positivity can reduce providers' percetions of their need for support, and simultaneously bolster pro-relational sentiments. Thus, there may be a potential cost to expressing positivity in support-seeking contexts, but our studies suggest that in close relationship contexts, such costs are often offset by the benefits that positive expressions confer (seemingly through pro-relational sentiments).

Strengths and Limitations

The current studies has several strengths. The behavioral observation methods used in Studies 1 and 4 allowed us to examine spontaneously-occurring expressions of positivity in conversations between romantic couple members. In both studies, we statistically controlled for seeker-expressed negativity to demonstrate that the expression of positivity—rather than the presence or absence of negativity—was a meaningful predictor of provider responsiveness. We also controlled for key individual differences (e.g., provider self-esteem) and relationship variables (e.g., seeker's relationship quality) to rule out plausible third variables. Given the importance of "focus[ing] on actual support behaviors that are enacted in dyadic interaction and the degree to which those behaviors are responsive to the needs of recipients" (Feeney & Collins, 2018, p. 292) that close relationship and support scholars have highlighted, another strength of the observational methods used in Studies 1 and 4 is that they enabled behavioral assessments of providers' responsive support toward their support-seeking romantic partner.

Complementing this correlational work with experimental methods, Studies 2 and 3 used tightly controlled manipulations of positive expressivity, permitting causal conclusions regarding seeker-expressed positivity's role in shaping provider responsiveness. Separate type-specific positivity conditions in Study 3 helped to disentangle the direct effects of partner-oriented,

stressor-oriented, and unspecified positivity on provider responsiveness. Further, we examined full mediated support-eliciting and support-suppressing pathways in Studies 2, 3, and 4. Across studies, we considered various kinds of stressors (a recent upsetting event, interpersonal conflict, greatest fear), probed the effects of stressor severity when possible, used different modes of communication (video-message, email, face-to-face discussions), and recruited samples that varied on important dimensions (e.g., age, relationship length).

The current work also has limitations that should be acknowledged. Each correlational study (Studies 1 and 4) had different limitations, which the other helped to address. The support interaction for Study 1 involved a video-message exchange task, which some might argue has low ecological validity. Study 4 involved face-to-face discussions, which opens the possibility that provider responsiveness caused changes in seeker positive expressivity. The face-to-face support discussions in Study 4 address the low ecological validity of the support interaction in Study 1, and separating seekers' disclosures temporally from providers' replies in Study 1 renders the reverse causality explanation implausible. In Study 4, seekers and providers did not switch roles, which would have increased our statistical power. Additionally, in Study 1 we did not assess stressor recency (within the one year timeframe specified) or the degree to which participants had previously talked to their partner about the stresssor. Although Study 4 findings revealed that frequency of past discussion of their greatest fear did not predict seekers' positivity or moderate positivity's effects on provider responsiveness, future work should examine whether positivity's presence and functions differ as a function of stressor recency or past discussion.

Studies 2 and 3 used imagined support scenarios, which enabled tightly controlled manipulations of seeker-expressed positivity, but is a step removed from studying actual interactions. We attempted to minimize this limitation by asking participants to actually write a

response to their partner's disclosure—thereby capturing a behavioral response (Sassenberg & Ditrich, 2019) that required investment of time and effort. Such imagined scenario paradigms have yielded similar results to studies looking at same processes in live interactions or assessing actual behavior (e.g., Forest et al., 2014; Jakubiak & Feeney, 2016). Moreover, converging evidence across these well-powered experiments and our behavioral observation studies increases our confidence in the robustness of positivity's effects on support.

Although the current findings provide much support for our hypotheses regarding direct path from positive expressivity to responsive support, and the indirect paths via efficacy beliefs, pro-relational sentiments, and need appraisal, there were some mixed findings across studies (see Tables 12 and 13, for summaries). For example, some studies yielded evidence that partner-oriented positivity was particularly robust predictor of heightened responsiveness, whereas other studies yielded evidence that unspecified positivity was a particularly robust predictor. Additionally, regarding mechanisms, some studies provided evidence for either the conceptual model's support-eliciting indirect pathway through efficacy beliefs or for the conceptual model's support-suppressing indirect pathway through need appraisals, but not both. Such inconsistencies in findings point to the importance of considering moderating variables. Once more nuanced understanding of positive expressivity's effects on responsive support is achieved, work in this area could ultimately be useful to seekers who want to optimize their receipt of responsive support—a point to which we return shortly.

Finally, mediation analyses yielded findings consistent with our theoretical model, but mediators were measured (not manipulated) and were assessed at the same time as outcomes. Thus, we cannot draw causal conclusions about the relations between the proposed mechanisms and responsiveness. Although some experimental evidence links these mechanisms—especially

pro-relational sentiments and need appraisals—to support in other contexts (see Walsh & Forest, 2021), our mediation findings should be interpreted with caution.

Future Directions

The current findings lay the groundwork for further research on positive expressivity's effects in support-seeking contexts. In their theoretical review, Walsh and Forest (2021) speculated about potential moderators of the direct path (Path I, Figure 1) including features of the seeker, provider, relationship, support communication, and cultural context. Although not a primary aim of the current investigation, we tested several such moderators (e.g., seeker negative expressivity, relationship quality) in supplementary models and found hints of moderated effects (see OSM). Research specifically aimed at testing such moderators is still needed, given that the current studies may not have been optimally powered to test these interactions.

We also suspect that value of seekers' positive expressions hinges on their perceived authenticity and social appropriateness. If providers think that seekers are being inauthentic, seekers' positive expressions may backfire; people tend to view insincere emotional expressions as inappropriate (van Kleef, 2016) and find others whose expressions are fake (vs. genuine or neutral) to be less likable and trustworthy (Krumhuber et al., 2007). Similarly, work on affective deviance suggests that if the type or intensity of seekers' positivity violates social norms, it is likely to be ineffective at—if not counterproductive to—eliciting partner responsiveness (e.g., Jachimowicz et al., 2019). Understanding whether people can be instructed to add positive expressions to their negative support-seeking disclosures in ways that feels sincere to providers and authentic to themselves will be an important future step.

Additional, related lines of inquiry that researchers might pursue involve questions about who tends to use positive expressivity in distress-related support-seeking contexts and why they

do so. Little is known about who is (un)likely to express positivity when seeking support for negative events (Forest et al., 2021). Studies 1 and 4 suggest that people who have higher (vs. lower) attachment security, self-esteem, or relationship quality express more positivity in their support-seeking disclosures (see Tables S2 and S9 in OSM). Many possible motives for positive expressivity may exist (e.g., desire to comply with social norms, manage others' impressions, minimize provider distress). A better understanding of who fails to express positivity when seeking support, and when and why they might do so, could offer insight into who might benefit from seeker-expressed positivity's support-eliciting potential.

Finally, the current studies focused on one person's stressors. But couples often co-experience stressors (e.g., natural disasters, financial challenges) and cope with such troubles together. Future work should examine whether expressing positivity about shared stressors can enhance or undermine support processes and relational outcomes. Expressing positivity in such contexts could have benefits through processes similar to those considered in Figure 1. However, expressing positivity in the context of a shared stressor could sometimes be costly—for example, when individuals express positivity that conflicts with their partner's appraisal of the situation.

Contributions

As the first empirical investigation focusing on positive expressivity as a support-seeking behavior, this research complements and extends recent theoretical work on this topic (Walsh & Forest, 2021). Although there is evidence scattered across a variety of literatures that suggests the support-eliciting potential of positive expressivity in negative contexts, no empirical work had systematically investigated this process. The work that did exist had notable limitations (e.g., little emphasis on close partners, live interactions, support quality, or mechanisms; Walsh & Forest, 2021). The current work begins to fill these gaps. Using samples of romantic couples or

romantically-involved individuals, we examined positivity's impacts on responsive support in observational studies and controlled experiments and we tested mediated pathways through multiple mechanisms. As such, this work lays the groundwork for further research on the prevalence, antecedents, and consequences of expressing positivity in support-seeking contexts.

Contributing to the social support literature, this work focuses on the seldom-considered active role of support-seekers in obtaining support. In so doing, we answer Feeney and Collins's (2015a) call for researchers to investigate the seeker's role in constructing their support outcomes. Additionally, whereas predominant perspectives on support emphasize what support-recipients (or seekers) need within support interactions and how providers meet (or fail to meet) those needs, our work emphasizes what *providers* need to deliver responsive support, and how seekers can help to meet those provider needs through their support-seeking behaviors (thereby optimizing their own support outcomes; see Forest et al., 2021; Walsh & Forest, 2021). Findings from Studies 1 and 4 extend extant work by showing the additive contributions of seeker positivity and negativity, suggesting that each of these behaviors may provide unique support-relevant information to providers (see Forest et al., 2021). Our findings underscore that what seekers do within a support interaction matters for predicting partner responsiveness.

This work also makes important contributions to the literatures on emotion and self-disclosure, which currently provide limited understanding of interpersonal processes in contexts involving contemporaneously-expressed positivity and negativity (e.g., van Kleef, 2016). Research on self-disclosure has often focused on positive disclosures or negative disclosures, or the value of disclosing about positive events to others (e.g., Gable & Reis, 2010). The value of expressing positivity when disclosing about negative events has received scant consideration. The current work addresses these gaps and suggests that positive expressivity can also be

beneficial in negative contexts. Additionally, athough disagreement persists among emotion scholars about the best way to group discrete positive emotions (see L. Graham et al., 2019; Keltner, 2019), the current work suggests a meaningful way to parse positive expressivity into separate (but sometimes related) types based on referent, consistent with past theorizing (see Walsh & Forest, 2021). Accordingly, this work may inform the ways in which emotion researchers think about and group different types of positive emotion.

Finally, this work contributes literature on close relationships. Whereas previous work has focused on the personal and relational benefits of disclosing about positive events and experiences (e.g., Gable & Reis, 2010; Peters et al., 2018), findings from the current work suggest that expressing positivity in negative contexts may also have benefits for seekers, providers, and their relationships. Although the current investigation focused on the effects of positive expressivity within the support interaction, the effects we observed on provider pro-relational sentiments and efficacy beliefs and on seekers' perceptions of provider responsiveness suggest that seeker-expressed positivity may confer benefits beyond the support interaction to the relationship more generally. Future studies might investigate the donwnstream consequences of the processes we have documented for people's relationships in the long-term.

Conclusion

In the current work, we examined whether and why support-seekers' positive expressivity might elicit supportive responses from partners (providers) in negative disclosure contexts (Walsh & Forest, 2021). Our findings highlight the potential value of positive expressivity as a support-elicitor, answering support researchers' call to investigate how people can cultivate support (Feeney & Collins, 2015a). Overall, studies provided strong evidence for Figure 1's direct path (linking positive expressivity to responsive support). Studies also revealed that each

type of positivity considered is likely to enhance support in some contexts, with the most consistent and robust evidence emerging for partner-oriented positivity, followed by stressor-oriented positivity. We also found evidence supporting two support-eliciting pathways (via efficacy beliefs and pro-relational sentiments), and a support-suppressing pathway (via need appraisal)—revealing why positivity often enhances (but may sometimes suppress) responsive support. Taken together, these studies highlight support-seekers' active role in obtaining support, provide empirical evidence linking positive expressivity to responsiveness in support contexts, point to the value of particular positivity types, and offer insight into the mechanisms through which positivity may shape support. When facing bad times, expressing the good—positive thoughts and feelings individuals have about their partner, the stressor, or perhaps even unspecified forms of positivity—may help them cultivate support that meets their needs.

References

Algoe, S. B., Gable, S. L., & Maisel, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships, 17*(2), 217–233. https://doi.org/10.1111/j.1475-6811.2010.01273.x

Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships in everyday life. *Emotion, 8*(3), 425–429. https://doi.org/10.1037/1528-3542.8.3.425

American Psychological Association (2018). *Stress in America: Generation Z. Stress in America™ Survey*. https://www.apa.org/news/press/releases/stress/2018/stress-gen-z.pdf

American Psychological Association (2022). *Stress in America: Concerned for the Future, Beset by Inflation.* Stress in America™ Survey. https://www.apa.org/news/press/releases/stress/2022/october-2022-topline-data.pdf

Aragón, O. R., Clark, M. S., Dyer, R. L., & Bargh, J. A. (2015). Dimorphous expressions of positive emotion: Displays of both care and aggression in response to cute stimuli. *Psychological Science*, *26*(3), 259–273. https://doi.org/10.1177/0956797614561044

Bandura A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman/Times Books/ Henry Holt & Co.

Barbee, A. P., & Cunningham, M. R. (1995). An experimental approach to social support communications: Interactive coping in close relationships. *Annals of the International Communication Association*, *18*(1), 381-413. https://doi.org/10.1080/23808985.1995.11678921

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, *5*(4), 323–370. https://doi.org/10.1037/1089-2680.5.4.323

Bolger, N., & Amarel, D. (2007). Effects of social support visibility on adjustment to stress: Experimental evidence. *Journal of Personality and Social Psychology*, *92*(3), 458–475. https://doi.org/10.1037/0022-3514.92.3.458

Bolger, N., Foster, M., Vinokur, A. D., & Ng, R. (1996). Close relationships and adjustments to a life crisis: The case of breast cancer. *Journal of Personality and Social Psychology*, *70*(2), 283–294. https://doi.org/10.1037/0022-3514.70.2.283

Brosschot, J. F., & Thayer, J. F. (2003). Heart rate response is longer after negative emotions than after positive emotions. *International Journal of Psychophysiology*, *50*(3), 181–187. https://doi.org/10.1016/s0167-8760(03)00146-6

Capps, L., & Bonanno, G. A. (2000). Narrating bereavement: Thematic and grammatical predictors of adjustment to loss. *Discourse Processes, 30*(1), 1–25. https://doi.org/10.1207/S15326950dp3001_01

Cavallo, J. V., & Hirniak, A. (2019). No assistance desired: How perceptions of others' self-esteem affect support-seeking. *Social Psychological and Personality Science*, *10*(2), 193–200. https://doi.org/10.1177/1948550617732394

Chow, C., & Buhrmester, D. (2011). Interdependent patterns of coping and support among close friends. *Journal of Social and Personal Relationships*, *28*(5), 684–705. https://doi.org/10.1177/0265407510386134

Cohen, S. (2004). Social relationships and health. *American Psychologist, 59*(8), 676–684. https://doi.org/10.1037/0003-066X.59.8.676

Cohen, S., Gianaros, P. J., & Manuck, S. B. (2016). A stage model of stress and disease. *Perspectives on Psychological Science*, *11*(4), 456–463. https://doi.org/10.1177/1745691616646305

Collins, N. L., & Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality and Social Psychology*, *78*(6), 1053–1073. https://doi.org/10.1037/0022-3514.78.6.1053

Collins, N. L., Ford, M. B., Guichard, A. C., Kane, H. S., & Feeney, B. C. (2010). Responding to need in intimate relationships: Social support and caregiving processes in couples. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 367-389). American Psychological Association.

Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47(5)*, 1105-1117. https://doi.org/10.1037/0022-3514.47.5.1105

Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: revising the adaptation theory of well-being. *The American psychologist*, *61*(4), 305–314. https://doi.org/10.1037/0003-066X.61.4.305

Don, B. P., Mickelson, K. D., & Barbee, A. P. (2013). Indirect support seeking and perceptions of spousal support: An examination of a reciprocal relationship. *Personal Relationships, 20*(4), 655-668. http://dx.doi.org/10.1111/pere.12006

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149-1160.

Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology, 80*(6), 972-994. http://dx.doi.org/10.1037/0022-3514.80.6.972

Feeney, B. C., Collins, N. L. (2015a). A new look at social support: A theoretical perspective on thriving through relationships. *Personality and Social Psychology Review*, *19*(2), 113-147. https://doi.org/10.1177/1088868314544222

Feeney, B. C., & Collins, N. L. (2015b). Thriving through relationships. *Current Opinion in Psychology*, 1, 22-28. https://doi.org/10.1016/j.copsyc.2014.11.001

Feeney, B. C., & Collins, N. L. (2018). Social support in close relationships. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (p. 282–296). Cambridge University Press. https://doi.org/10.1017/9781316417867.023

Feeney, B. C., Van Vleet, M., Jakubiak, B. K., & Tomlinson, J. M. (2017). Predicting the pursuit and support of challenging life opportunities. *Personality and Social Psychology Bulletin*, *43*(8), 1171–1187. https://doi.org/10.1177/0146167212442971

Finkenauer, C., & Rimé, B. (1998). Socially shared emotional experiences vs. emotional experiences kept secret: Differential characteristics and consequences. *Journal of Social and Clinical Psychology, 17*(3), 295-318. https://doi.org/10.1521/jscp.1998.17.3.295

Fletcher, G. J., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin*, *26*(3), 340-354. https://doi.org/10.1177/0146167200265007

Folkman, S., & Moskowitz, J. T. (2000). Stress, positive emotion, and coping. *Current Directions in Psychological Science*, *9*(4), 115–118. https://doi.org/10.1111/1467-8721.00073

Forest, A. L., Kille, D. R., Wood, J. V., & Holmes, J. G. (2014). Discount and disengage: How chronic negative expressivity undermines partner responsiveness to negative disclosures. *Journal of Personality and Social Psychology*, *107*(6), 1013–1032. https://doi.org/10.1037/a0038163

Forest, Walsh, R. M., & Krueger, K. L. (2021). Facilitating and motivating support: How support-seekers can affect the support they receive in times of distress. *Social and Personality Psychology Compass*, *15*(6). https://doi.org/10.1111/spc3.12600

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350–365. https://doi.org/10.1037/0022-3514.78.2.350

Fredrickson, B. L. (1998). What Good Are Positive Emotions? *Review of General Psychology*, *2*(3), 300-319. https://doi.org/10.1037/1089-2680.2.3.300

Gable, S. L., & Reis, H. T. (2010). Good news! Capitalizing on positive events in an interpersonal context. In Zanna, M. P. (Ed.), *Advances in experimental social psychology* (Vol. 42, pp. 195–257). Elsevier Academic Press.

Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology*, *87*(2), 228–245. https://doi.org/10.1037/0022-3514.87.2.228

Graham, L. E., Thomson, A. L., Nakamura, J., Brandt, I. A., & Siegel, J. T. (2019). Finding a family: A categorization of enjoyable emotions. *The Journal of Positive Psychology*, *14*(2), 206-229. https://doi.org/10.1080/17439760.2017.1402074

Graham, S. M., Huang, J. Y., Clark, M. S., & Helgeson, V. S. (2008). The positives of negative emotions: Willingness to express negative emotions promotes relationships. *Personality and Social Psychology Bulletin, 34*(3), 394-406. http://dx.doi.org/10.1177/0146167207311281

Griffin, K. M., & Sayette, M. A. (2008). Facial reactions to smoking cues relate to ambivalence about smoking. *Psychology of Addictive Behaviors*, *22*(4), 551–556. https://doi.org/10.1037/0893-164x.22.4.551

Gross, J. J., & John, O. P. (1995). Facets of emotional expressivity: Three self-report factors and their correlates. *Personality and Individual Differences*, *19*(4), 555–568. https://doi.org/10.1016/0191-8869(95)00055-b

Hadden, B. W., Rodriguez, L. M., Knee, C. R., & Porter, B. (2015). Relationship autonomy and support provision in romantic relationships. *Motivation and Emotion*, *39*(3), 359-373. https://doi.org/10.1007/s11031-014-9455-9

Halberstadt, A. G., Cassidy, J., Stifter, C. A., Parke, R. D., & Fox, N. A. (1995). Self-expressiveness within the family context: Psychometric support for a new measure. *Psychological Assessment*, *7*(1), 93–103. https://doi.org/10.1037/1040-3590.7.1.93

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.

Helgeson, V. S., Reynolds, K. A., & Tomich, P. L. (2006). A meta-analytic review of benefit finding and growth. *Journal of Consulting and Clinical Psychology*, *74*(5), 797–816. https://doi.org/10.1037/0022-006x.74.5.797

Hui, C. M., Ng, J. C. K., & Shieh, N. J. (2020). Perceiving change in responsiveness from the relationship partner's behaviors. *Social Psychological and Personality Science, 11*(6), 835-845. https://doi.org/10.1177/1948550619887704

Jachimowicz, J. M., To, C., Agasi, S., Côté, S., & Galinsky, A. D. (2019). The gravitational pull of expressing passion: When and how expressing passion elicits status conferral and support from others. *Organizational Behavior and Human Decision Processes*, *153*, 41-62. https://doi.org/10.1016/j.obhdp.2019.06.002

Jakubiak, B. K., & Feeney, B. C. (2016). A sense of security: Touch promotes state attachment security. *Social Psychological and Personality Science, 7*(7), 745–753. https://doi.org/10.1177/1948550616646427

Jakubiak, B. K., & Feeney, B. C. (2019). Interpersonal touch as a resource to facilitate positive personal and relational outcomes during stress discussions. *Journal of Social and Personal Relationships, 36*(9), 2918-2936. https://doi.org/10.1177/0265407518804666

Jayamaha, S. D., & Overall, N. C. (2019). The dyadic nature of self-evaluations: Self-esteem and efficacy shape and are shaped by support processes in relationships. *Social Psychological and Personality Science, 10*(2), 244–256. https://doi.org/10.1177/1948550617750734

Juth, V., Smyth, J. M., Carey, M. P., & Lepore, S. J. (2015). Social constraints are associated with negative psychological and physical adjustment in bereavement. *Applied Psychology: Health and Well-Being*, *7*(2), 129–148. https://doi.org/10.1111/aphw.12041

Keltner, D. (2019) Toward a consensual taxonomy of emotions, *Cognition and Emotion*, *33*(1), 14-19, https://doi.org/10.1080/02699931.2019.1574397

Keltner, D., & Bonanno, G. A. (1997). A study of laughter and dissociation: Distinct correlates of laughter and smiling during bereavement. *Journal of Personality and Social Psychology, 73*(4), 687–702. https://doi.org/10.1037/0022-3514.73.4.687

Keltner, D., & Kring, A. M. (1998). Emotion, social function, and psychopathology. *Review of General Psychology*, *2*(3), 320-342. https://doi.org/10.1037/1089-2680.2.3.320

Kenny, D. A. (2017, February). MedPower: An interactive tool for the estimation of power in tests of mediation [Computer software]. Available from https://davidakenny.shinyapps.io/MedPower/.

Kennedy-Moore, E., & Watson, J. C. (2001). How and when does emotional expression help? *Review of General Psychology*, *5*(3), 187-212. https://doi.org/10.1037/1089-2680.5.3.187

Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist, 63*(6), 518–526. https://doi.org/10.1037/0003-066X

Krumhuber, E., Manstead, A. S. R., Cosker, D., Marshall, D., Rosin, P. L., & Kappas, A. (2007). Facial dynamics as indicators of trustworthiness and cooperative behavior. *Emotion*, *7*(4), 730–735. https://doi.org/10.1037/1528-3542.7.4.730

Krueger, K., & Forest, A. (2022). Putting responsiveness in context: How a partner's responsiveness baseline shapes perceived responsiveness. *Personal Relationships*, *29,* 857–874. https://doi.org/10.1111/pere.12447

Lemay E. P & Clark M. S. (2015). Motivated cognition in relationships. *Current Opinion in Psychology, 1, 72*-75. https://doi.org/10.1016/j.copsyc.2014.11.002

Lepore, S. J., & Helgeson, V. S. (1998). Social constraints, intrusive thoughts, and mental health after prostate cancer. *Journal of Social and Clinical Psychology*, *17*(1), 89–106. https://doi.org/10.1521/jscp.1998.17.1.89

Lepore, S. J., & Revenson, T. A. (2007). Social constraints on disclosure and adjustment to cancer. *Social and Personality Psychology Compass*, *1*(1), 313–333. https://doi.org/10.1111/j.1751-9004.2007.00013.x

Lyubomirsky, S., King, L., & Diener, E. (2005). The Benefits of Frequent Positive Affect: Does Happiness Lead to Success? *Psychological Bulletin, 131*(6), 803–855. https://doi.org/10.1037/0033-2909.131.6.803

Maisel, N. C., & Gable, S. L. (2009). The paradox of received social support. *Psychological Science*, *20*(8), 928–932. https://doi.org/10.1111/j.1467-9280.2009.02388.x

Marigold, D. C., Cavallo, J. V., Holmes, J. G., & Wood, J. V. (2014). You can't always give what you want: The challenge of providing social support to low self-esteem individuals. *Journal of Personality and Social Psychology*, *107*(1), 56–80. https://doi.org/10.1037/a0036554

Mauss, I. B., & Robinson, M. D. (2009). Measures of emotion: A review. *Cognition & Emotion*, *23*(2), 209–237. https://doi.org/10.1080/02699930802204677

McGrath, C., Jordens, C. F., Montgomery, K., & Kerridge, I. H. (2006). 'Right' way to 'do' illness? Thinking critically about positive thinking. *Internal Medicine Journal*, *36*(10), 665–669. https://doi.org/10.1111/j.1445-5994.2006.01194.x

Mikulincer, M., & Shaver, P. R. (2009). An attachment and behavioral systems perspective on social support. *Journal of Social and Personal Relationships*, *26*(1), 7–19. https://doi.org/10.1177/0265407509105518

Moyer, A., & Salovey, P. (1999). Predictors of social support and psychological distress in women with breast cancer. *Journal of Health Psychology*, *4*(2), 177–191. https://doi.org/10.1177/135910539900400212

Nadler, A. (2015). The other side of helping: Seeking and receiving help. In D. A. Schroeder & W. G. Graziano (Eds.), *The Oxford handbook of prosocial behavior* (pp. 214-238). Oxford University Press.

Nesse, R. M., & Ellsworth, P. C. (2009). Evolution, emotions, and emotional disorders. *American Psychologist*, *64*(2), 129–139. https://doi.org/10.1037/a0013503

Neumann, R., & Strack, F. (2000). "Mood contagion": The automatic transfer of mood between persons. *Journal of Personality and Social Psychology, 79*(2), 211–223. https://doi.org/10.1037/0022-3514.79.2.211

Peters, B. J., Reis, H. T., & Gable, S. L. (2018). Making the good even better: A review and theoretical model of interpersonal capitalization. *Social and Personality Psychology Compass*, *12*(7), e12407. https://doi.org/10.1111/spc3.12407

Pietromonaco, P. R., Overall, N. C., & Powers, S. I. (2021). Depressive symptoms, external stress, and marital adjustment: The buffering effect of partner's responsive behavior. *Social Psychological and Personality Science*. Advance Online Publication. https://doi.org/10.1177/19485506211001687

Rafaeli, E., & Gleason, M. E. J. (2009). Skilled support within intimate relationships. *Journal of Family Theory & Review*, *1*(1), 20–37. https://doi.org/10.1111/j.1756-2589.2009.00003.x

Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. J. Mashek & A. P. Aron (Eds.), *Handbook of closeness and intimacy* (p. 201–225). Lawrence Erlbaum Associates Publishers.

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes & B. M. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions* (pp. 367-389). Oxford: John Wiley & Sons.

Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, *1*(1), 60–85. https://doi.org/10.1177/1754073908097189

Rimé, B., Bouchat, P., Paquot, L., & Giglio, L. (2020). Intrapersonal, interpersonal, and social outcomes of the social sharing of emotion. *Current Opinion in Psychology*, *31*, 127–134. https://doi.org.pitt.idm.oclc.org/10.1016/j.copsyc.2019.08.024

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

Sauter, D. (2010). More than happy: The need for disentangling positive emotions. *Current Directions in Psychological Science*, *19*(1), 36–40. https://doi.org/10.1177/0963721409359290

Sassenberg, K., & Ditrich, L. (2019). Research in social psychology changed between 2011 and 2016: Larger sample sizes, more self-report measures, and more online studies. *Advances in Methods and Practices in Psychological Science*, *2*(2), 107-114. https://doi.org/10.1177/2515245919838781

Sbarra, D. A., Smith, H. L., & Mehl, M. R. (2012). When leaving your ex, love yourself. *Psychological Science*, *23*(3), 261–269. https://doi.org/10.1177/0956797611429466

Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: The mobilization-minimization hypothesis. *Psychological Bulletin, 110*(1), 67–85. https://doi.org/10.1037/0033-2909.110.1.67

Tellegen, A., Watson, D., & Clark, L. A. (1999). On the dimensional and hierarchical structure of affect. *Psychological Science*, *10*(4), 297–303. https://doi.org/10.1111/1467-9280.00157

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior*, *52*(2), 145-161. https://doi.org/10.1177/0022146510395592

Uchino, B. N., Carlisle, M., Birmingham, W., & Vaughn, A. A. (2011). Social support and the reactivity hypothesis: Conceptual issues in examining the efficacy of received support during acute psychological stress. *Biological Psychology*, *86*(2), 137-142. https://doi.org/10.1016/j.biopsycho.2010.04.003

van Kleef, G. A. (2016). *The interpersonal dynamics of emotion: Toward an integrative theory of emotions as social information*. Cambridge University Press.

van Kleef G. A. (2017). The social effects of emotions are functionally equivalent across expressive modalities. *Psychological. Inquiry*, *28*(2-3), 211–216. https://doi.org/10.1080/1047840X.2017.1338102

Vollmann, M., & Renner, B. (2010). Better liked but not more supported: Optimism and social support from a provider's perspective. *Applied Psychology: Health and Well-Being, 2*(3), 362–373. https://doi.org/10.1111/j.1758-0854.2010.01039.x

Walsh, R. M., & Forest, A. L. (2021). Can expressing positivity elicit support for negative events? A process model and review. *Personality and Social Psychology Review*, *25*(1), 3-40. https://doi.org/10.1177/1088868320961899

Watson, D. (2000). *Mood and temperament*. Guilford Press.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The Experiences in Close Relationship Scale (ECR)-short form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, *88*(2), 187-204. https://doi.org/10.1080/00223890701268041

Winczewski, L. A., Bowen, J. D., & Collins, N. L. (2016). Is empathic accuracy enough to facilitate responsive behavior in dyadic interaction? Distinguishing ability from motivation. *Psychological Science, 27*(3), 394-404. http://dx.doi.org/10.1177/0956797615624491

Wood, J. V., & Forest, A. L. (2016). Self-protective yet self-defeating: The paradox of low self-esteem people's self-disclosures. In J. M. Olson & M. P. Zanna (Eds.), *Advances in experimental social psychology* (pp. 131–188). Elsevier Academic Press.

Yzerbyt, V., Muller, D., Batailler, C., & Judd, C. M. (2018). New recommendations for testing indirect effects in mediational models: The need to report and test component paths. *Journal of Personality and Social Psychology, 115*(6), 929–943. https://doi.org/10.1037/pspa0000132

Footnotes

[1] People sometimes may not want or seek support, such as when they feel ashamed or guilty (Finkenauer & Rimé, 1998; Nadler, 2015). Here, we focus on contexts involving people who are seeking support.

[2] The current work focuses on people who are seeking support, and who are doing so by explicitly disclosing about a stressor or problem. Although people can obtain support without directly addressing the stressor (i.e., implicit support-seeking), we focus on explicit support-seeking contexts because this represents the typical form of support-seeking in Western cultural contexts (Kim et al., 2008).

[3] Our decision to first consider positivity as a broad unitary is also consistent with the approach that guided Walsh and Forest's (2021) literature review.

[4] We report items as worded in the original materials, which were developed several years ago. However, we acknowledge that APA recommendations indicate we should use "their" as a generic third-person singular pronoun.

[5] Although these models involve data from couples, linear regression analyses are appropriate because the outcome of interest (provider responsiveness) was assessed in only one member of each couple (i.e., responsiveness is not nested within couples).

[6] We did not include a positivity-only condition because we were interested in examining the potential value of positive expressivity in distress-related support-seeking contexts, in which people typically express negativity (see Forest et al., 2021; Rime, 2009). The guiding conceptual model (adapted from Walsh & Forest, 2021; see Figure 1) considers how positivity might help overcome the motivational challenges of supporting a distressed seeker. Thus, we opted to compare plus-positivity to a negativity-only (and a plus-filler) condition.

[7] The number of participants exceeds the number of HITs posted on MTurk, suggesting that some participants did not request remuneration.

[8] One participant reported that they had taken the survey twice, so we excluded data from their second time participating.

[9] A regression model predicting responsiveness from dummy-coded condition (reference category = plus-positivity condition), provider relationship quality (PRQC), and Condition × PRQC interactions showed no two-way interaction effects involving participant PRQC and the plus-positivity condition compared to the negativity-only condition (p = .242) or the plus-filler condition (p = .108).

[10] The same pattern of results emerged in a parallel mediation model that estimated indirect effects via positive mood and via need appraisals simultaneously (see Table S5 in OSM).

[11] We thank the anonymous reviewer for suggesting that we include perceived responsiveness as an outcome in our models.

[12] Data from the background survey and online follow-up survey in this couples' study have been used in one accepted manuscript and one manuscript now under revision for invited resubmission (details provided in cover letter of initial submission), to test hypotheses distinct from those tested here. The current investigation is the first to test hypotheses about positive expressivity's links with responsiveness and the first to use coder ratings of seeker and provider behavior from the negative disclosure interaction.

[13] Providers had been asked to guess what the target would be before the support conversation. After the conversation, we referred to the fear that the seeker talked about as the "actual target."

[14] For each type of positivity, we also ran serial mediation models similar to the model depicted in Figure 6, predicting perceived responsiveness through either pro-relational sentiments or efficacy beliefs (M_1) and then coder-rated responsiveness (M_2). Indirect effects also emerged for all three types via pro-relational sentiments or efficacy beliefs (see OSM for full results).