

New Faculty Members' Emotions:

A Mixed Method Study

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Robert H. Stupnisky, University of North Dakota

Reinhard Pekrun, University of Munich

Stephanie Lichtenfeld, University of Munich

Robert H. Stupnisky, Department of Educational Foundations and Research. Reinhard Pekrun, Department of Psychology, University of Munich, Germany. Stephanie Lichtenfeld, Department of Psychology, University of Munich, Germany.

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Correspondence concerning this article should be addressed to Robert H. Stupnisky, Educational Foundations & Research Department, University of North Dakota, Stop 7189, Grand Forks, ND 58202. E-mail: robert.stupnisky@und.edu

Abstract

The current study developed when new faculty members spontaneously reported discrete emotions during focus groups exploring the factors affecting their success. Qualitative analysis using the framework of Pekrun's (2006) Control-value Theory of Emotions revealed 18 different emotions with varying frequencies. A follow-up survey of 79 new faculty members showed significantly more enjoyment, pride, and boredom regarding teaching, whereas more anxiety, guilt, and helplessness were found concerning research. Sixteen of the 20 emotions significantly correlated with perceived success. Regressions revealed that several emotions (enjoyment, pride, boredom) played a role in teaching success by mediating value; conversely, numerous emotions (enjoyment, pride, shame, helplessness) mediated the predictive effect of control on research success. Implications for new faculty development and emotion research are discussed.

Keywords: Faculty, emotions, control, value, mixed methods

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In a national survey conducted for the American Association of University Professors (AAUP), an overwhelming majority of institutions rated recruiting new faculty (96%) and retaining current faculty (89%) as very important (Conley, 2007). Despite being highly valued, several studies have found untenured, assistant professors have stronger intentions to leave their institutions than their senior counterparts (Rosser, 2004; Smart, 1990; Zhou & Volkwein, 2004). In coming years the hiring of new faculty members in the US is likely to increase based on the growing enrollment of students in post-secondary education (US Census Bureau, 2012); thus, it is critical to investigate factors impacting new faculty members' success.

Researchers have previously used qualitative methods to consistently identify several factors affecting early career productivity and achievement: expectations for performance, collegiality, balance within professional roles, and balance between professional and personal life (Austin & Rice, 1998; Luce & Murray, 1998; Rice, Sorcinelli, & Austin, 2000; Trower & Gallagher, 2008; Trotman & Brown, 2005; for a review see Austin, Sorcinelli, & McDaniels, 2007). However, quantitative research examining predictors of new faculty members' success found these same variables explained only a small to moderate amount of the variance (Harrison & Kelly, 1996; Olsen, 1993; Ponjuan, Conley, & Trower, 2011; Author, 2014) and sometimes none at all (Sax, Hagedorn, Arrendondo, & Dircrisi, 2002); thus, other factors predicting new faculty member success need to be explored.

A growing number of researchers are studying emotions in achievement contexts. Most notably, studies on college students (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011; Pekrun, Goetz, Titz, & Perry, 2002) and school teachers (Frenzel, Goetz, Stephens, & Jacob, 2009;

Sutton, 2007) revealed emotions have important implications for learning, motivation, and success. New faculty members generally report high levels of satisfaction with their careers, although paradoxically a large proportion also find their work to be very stressful (33% in the first year, 49% in the third, and 71% in the fifth; Olsen & Sorcinelli, 1992; Sorcinelli, 1994). Despite starting careers long sought after, new faculty members face gaps in graduate school training (Austin, 2002), adjustment to a demanding faculty life style, and increased pressure to succeed—factors leaving faculty susceptible to an intense array of emotions that may affect their success, although this has rarely been empirically examined.

To address this gap in the research literature, the purpose of the current study was to explore the presence and frequency of emotions among new faculty members, and test how emotions related to their success in the domains of teaching and research. To do so, the researchers utilized a two-phase, exploratory mixed-method research design (Creswell & Plano-Clark, 2010): focus groups to discover the emotions experienced by new faculty members, and an online survey to examine how their emotions relate to success in the domains of teaching and research. Prior to describing the methodology and findings, we review the research literature on new faculty members, factors affecting their success, achievement emotions, and studies related to faculty emotions.

New Faculty Members' Success: Definitions and Past Research

Definitions of “new faculty members” have been inconsistent in past research. For example, some researchers have identified new faculty members as persons within their first seven years of appointment or who have not yet been awarded tenure (Austin, Sorcinelli, & McDaniels, 2007), individuals between completion of doctorate and receiving tenure (Solem & Foote, 2004), or those within their first three years of employment (Eddy & Gaston-Gayles,

2008). For the current study, the researchers utilized emergent results from previously collected focus groups on first-to-third year faculty members (Author, 2014) to inform a quantitative survey for a larger group of pretenure faculty members.

The definition of success for new faculty is another inconsistency in the literature. Previous studies have defined faculty success in terms of research productivity (Sax, Hagedorn, Arredondo, & Dicrisi, 2002; Perry, Clifton, Menec, Struthers, & Menges, 2000), teaching success (Perry et al., 1997), low stress (Hill, 2009; Lease, 1999), job satisfaction (COACHE, 2010, 2008), and career commitment (Bland, Center, Findstad, Risbey, & Staples, 2006; Harrison & Kelly, 1996) to name but a few. The ambiguous criteria for success is also evidenced by most higher education institutions (including where the current study data were collected) having a unique set of tenure and promotion guidelines in each academic department. This “uncertainty about ‘what matters’ when it comes time to evaluate faculty” (p. 3) has even led to initiatives such as the AERA Task Force on Evaluating Educational Research, Scholarship, and Teaching in Postsecondary Education (2013). Thus, as no clear objective criteria is evident, in the current study success was defined by self-reported measures of perceived success in the domains of teaching and research.

Past investigations into new faculty success have considered the role of a large number of factors including gender (COACHE, 2008, 2010), ethnicity (Ponjuan et al., 2011), institution type (Perry et al., 2000), and graduate school socialization (Austin, 2002). However, Austin et al. (2007) stated the majority of past studies on new faculty members’ success have focused on three main antecedents: clarity of expectations, collegiality, and finding balance both at work (e.g., teaching, research, service) and in life. Several recent qualitative studies again replicated these themes, which led those researchers to describe their findings as having “few surprises”

(Trower & Gallagher, 2008, p. 2) and to “echo those identified in other research” (Trotman & Brown, 2005, p. 1).

Despite their consistency in qualitative studies, these variables showed limited effectiveness as predictors of success in quantitative studies. For instance, Ponjuan et al. (2011) studied 6,882 new faculty from 80 institutions and reported that clarity of tenure expectations predicted 7% of the interpersonal relationships with senior and other pretenure faculty. Harrison and Kelly (1996) found physical therapy new faculty members' perceived level of social support (i.e., work/life balance) predicted 31% of their current job satisfaction, but only 9% of anticipation to remaining in academia for the remainder of their professional career. Sax et al. (2002) found a combination of work-life balance factors (e.g., marital status, number of dependents, home stress, financial stress) contributed nothing to the prediction of faculty research productivity after professional variables were accounted for (i.e., academic rank, salary, orientation towards research, desire for recognition). Olsen (1993) found that balancing work demands, combined with institutional recognition and support, predicted 43% of job satisfaction and 20% of work stress in the first year of appointment. Finally, Author (2014) examined the predictive validity of all four of these prominent themes on 12 types of new faculty success ranging from annual performance reviews to general life satisfaction; however, the total combined variance explained ranged only from 12% to 46%. Together, these results suggest that the established factors explain just a portion of new faculty members' success and other variables should be explored—one candidate that is gaining prominence as a predictor of success in the academic realm is emotions.

Achievement Emotions

Emotions are ubiquitous to the academic environment (Pekrun, 2006). Brief and Weiss (2002) illustrated the necessity and complexity of researching specific (i.e., discrete) emotions among individuals, such as new faculty members, by stating,

It is apparent that discrete emotions are important, frequently occurring elements of everyday experience. Even at work—perhaps especially at work—people feel angry, happy, guilty, jealous, proud, etc. Neither the experiences themselves, nor their consequences, can be subsumed easily under a simple structure of positive or negative states (p. 297).

Pekrun (2006; Pekrun et al., 2002) developed the Control-Value Theory of Achievement Emotions as a blueprint for the empirical examination of emotions that moves beyond general positive/negative affect and can be applied to a variety of individuals in different achievement domains. Emotions have often been defined as multi-component, psychological processes including affective, cognitive, physiological, motivational, and behavioral components (Damasio, 1994; Kleinginna & Kleinginna, 1981; Pekrun, 2006; Scherer, 1984). Anxiety, for example, is an emotion that makes individuals uneasy (affective), concerned (cognitive), tense (physiological), task avoidant (motivational), and displaying an anxious facial expression (behavioral). Emotions that are directly linked to achievement activities or outcomes, such as success in teaching or research, have been referred to as achievement emotions. Emotions can be categorized into several underlying dimensions, such as valence (positive vs. negative) and activation (activating vs. deactivating), but also organized in domain specific ways (teaching, research, etc.). Therefore, new faculty members may enjoy (positive, activating) teaching or find grading papers boring (negative, deactivating), whereas research may lead to guilt (negative,

activating) if avoided or relief (positive, deactivating) when a manuscript is submitted for peer review.

Pekrun (2006) states that appraisals of control (perceived causal influence over activities and outcomes) and value (perceived importance of activities and outcomes) serve as critical antecedents of achievement-related emotions, which in turn profoundly affect performance. For example, perceiving high control over achievement outcomes that are valued tends to evoke positive-activating emotions following success, such as pride when a manuscript is accepted, which are believed to improve achievement by promoting task-related attention, strengthening motivation, and enhancing use of adaptive strategies. Lack of control and high value of a failure outcome produces negative-activating emotions, such as anxiety of a research grant being rejected, which typically impairs interest and intrinsic motivation; however, they may enhance extrinsic motivation to invest effort and avoid failures. Moreover, low perceived controllability and high subjective value of failure outcomes, such as low student ratings of teaching, may yield negative-deactivating emotions like hopelessness that impair motivation and self-regulation.

Recently, research on achievement emotions in academic settings has grown in support of Pekrun's (2006) theory. Among college students, Pekrun, Goetz, Daniels, Stupnisky, and Perry (2010) found that boredom mediated the effects of perceived control on academic achievement. Also, a study by Pekrun and colleagues (2002) using German undergraduates found perceived control to have significant positive correlations with joy, hope, and pride, as well as significant negative correlations with anger, anxiety, shame, and hopelessness. Among school teachers, Frenzel et al. (2009) reported significant correlations between teacher-perceived discipline of students in the class (i.e., teacher control) and teachers reporting more enjoyment, as well as less anxiety and anger. Sutton (2007) found that teachers regularly convey their belief that

expressing positive emotions makes their teaching more effective, while reducing negative emotions bolsters their teaching effectiveness. Similar relationships among control, value, emotions, and success may be found among new faculty members, although limited research on this topic exists.

New Faculty Emotions and Success

New faculty members' reports of high job satisfaction confounded by elevated stress and attrition (Olsen & Sorcinelli, 1992; Sorcinelli, 1994; Author, 2014) suggests a high likelihood that they will experience a myriad of different emotions. Tenure-track faculty also present an interesting population because their workloads entail both teaching and research, which may yield different emotions in each domain that uniquely affect their success. Thus, while only a few studies to date have explored their emotions, there is potential that emotions play an important role in the success of new faculty members.

The existing research literature on new faculty members' discrete emotions is incomplete due to assessments of only a single emotion, combining several emotions together to represent general affect, or not assessing emotion antecedents such as control and value (Pekrun, 2006). Harrison and Kelly (1996), for instance, found physical therapy faculty members employed for less than five years reported a high incidence of loneliness (43%), which significantly negatively correlated with satisfaction and anticipation of remaining in academia. Kowai-Bell, Guadagno, Little, and Ballew (2012) found positive feedback on teaching via the website RateMyProfessor.com was positively associated with faculty members' general affect regarding teaching (i.e., looking forward to it) and general mood (i.e., increased): particularly for pre-tenured faculty members. Perry et al. (1997) found that new faculty members at Liberal Arts/Comprehensive I institutions with low control over their teaching, in comparison to faculty

with high control, experienced more negative emotions (worry, helplessness, guilt, frustration). Faculty members who had more control over their teaching were also more satisfied with their teaching and their careers, had less teaching- and career-related job stress, and were less likely to consider quitting their job. In a qualitative study, Neumann (2006) demonstrated the pervasiveness of emotional experiences among 40 professors' by documenting their "passionate thought" (i.e., flow experiences; Csikszentmihalyi's, 1990) regarding their scholarship. In contrast to the current investigation, however, Neumann explored post-tenure faculty members, did not emphasize domain specificity of emotions (e.g., teaching versus research), and did not explore discrete emotions that were negative and/or deactivating in nature (e.g., helplessness, boredom).

A number of past studies on new faculty members have also examined variables that are similar or related to emotions, but are not discrete achievement emotions containing affective, cognitive, physiological, motivational, and behavioral components (Pekrun, 2006). For example, Olsen (1993) explored job satisfaction using the definition by Locke (1976), "the positive emotional state resulting from attaining what one wants or values from a job" (p. 458). The measure of job satisfaction in that study involved faculty rating their satisfaction on eighteen different aspects of their work (e.g., job security, salary); thus, job satisfaction more strongly indicated a fulfillment of needs rather than the components of emotions described above. Another variable, burnout, is sometimes considered an emotion because Maslach and Jackson (1986) identified emotional exhaustion as one of its dimensions (i.e., being emotionally over-extended, depleted of one's emotional resources, fatigue, debilitation, loss of energy). Fernet, Guay, and Senécal (2004) found that job control, job demands, and work self-determination predicted burnout among university professors. Burnout, however, is an outcome that

incorporates more components than just emotions, such as depersonalization and reduced accomplishment that reflect negative aspects of the self and others.

In the current study, we qualitatively examined the emotions that emerged when new faculty members were discussing their success, followed by quantitatively testing how these emotions and others related to their success; thus, an exploratory-sequential mixed-method study was utilized (qual → QUAN = test theory, generalize findings; Creswell & Plano-Clark, 2010). Mixed methodology advantageously combines strengths of qualitative and quantitative methods for the purposes of creating depth and breadth of understanding within a single study. The current design employed all of the reasons for mixing data outlined by Creswell and Plano-Clark (2010), which include triangulation, complementarity, development, initiation, and expansion. Given that emotions are largely organized in domain-specific ways (Goetz, Frenzel, Pekrun, Hall, & Lüdtke, 2007), new faculty emotions were quantitatively measured and analyzed across the domains that are most emphasized in their job (teaching and research). Pekrun's (2006) Control-Value Theory of Achievement Emotions was used to guide our analyses and interpretations of results.

Qualitative Phase

Methodology

Participants. Eighteen first- to third-year faculty members (out of a pool of 70) from a large, Midwestern USA research university volunteered for one of four focus groups (Kruger & Casey, 2009) near the middle of the 2011 spring semester. Participating faculty members had their names entered into a drawing for \$100 and received a summary of the results. The participating faculty members' included 10 males and 8 females with an average age of 36.06 ($SD = 5.83$), 83.3% were white/Caucasian and spoke English as their first language, 72.2% were

married or living with a partner, 50% had dependent children, and they worked in variety of academic disciplines (e.g., atmospheric sciences, aviation, education, engineering, law, music, psychology, social work, etc.).

Data collection and analysis. The original purpose of the focus groups was to use phenomenological inquiry (Creswell, 2007; Mortari & Tarozzi, 2010) to gain insight into how participants described their experiences as faculty members to develop a greater understanding of the phenomenon of “new faculty success” (Author, 2014). To do so, participants were asked to respond to the following questions: “Based on your experiences [at your current institution], (1) What is “success” for a new faculty member? (2) What factors/challenges affect the success of new faculty members? (3) How do new faculty members obtain success or overcome challenges to be successful?” Faculty members participated in groups based on years of experience; specifically, the first two focus groups contained only first-year faculty members, and the final two focus groups contained second- and third-year faculty members. Each focus group was digitally recorded and ranged in time from 69 to 80 minutes.

To analyze the data, two researchers began by separately open coding the data, then meeting to discuss codes, returning to the data to review the codes, and then meeting again to discuss the findings. During the initial meeting after open coding, the researchers agreed that a wide range of discrete emotions were spontaneously being mentioned and that these emotions appeared to be highly salient to new faculty members’ success. As a separate analysis from the original purpose of the focus groups (Author, 2014), it was decided to return to the data to specifically code emotions, as well as the control and value components of Pekrun’s (2006) theory. The emotions were analyzed using classical content analysis (Leech & Onwuegbuzie, 2008) that entailed frequency counts of emotions and categorization according to typologies

from theory (i.e., Pekrun; Austin et al., 2007); in other words, the researchers quantified the qualitative data to confirm the presence of the theorized constructs.

The following steps were taken to ensure trustworthiness (Lincoln & Guba, 1985). First, in vivo terms from the focus group responses contributed to detailed findings (see below). Second, peer debriefing was conducted by the researchers analyzing the data comparing the emerging codes (i.e., emotions, control, value) from the focus groups. Third, triangulation of data sources, including participants from a wide range of disciplines and varying years of experience, was helpful in providing opportunities to compare and verify viewpoints. Fourth, member checking was done to allow participants the opportunity to provide feedback on a summary of the study findings, which yielded only affirmative responses.

Findings

Eighteen discrete emotions were mentioned in 76 statements: enjoyment, happiness, hope, love, excitement, relaxed, comfortable, anxious, worried, anger, guilt, frustration, unhappiness, envy, disappointment, regret, sadness, and loneliness.^{1 2} The emotions were categorized according to Pekrun's (2006) theory along the dimensions of valence (positive/negative) and activation (activating/deactivating; see Table 1). Examples of statements involving emotions for each category include: "I really do love to teach" (positive-activating), "I like working from home, I find it relaxing" (positive-deactivating), "It would be nice to take a vacation where I do not have to worry about anything the whole day" (negative-activating), and "I regret the day that I came here" (negative-deactivating). The most commonly reported emotions were positive-activating emotions (51.3%), of which enjoyment was the most frequently mentioned. Negative-activating emotions were the second most frequent category (28.9%), of which worry and guilt were the most commonly reported.

The emotions were also contrasted along three variables of interest based on Austin et al. (2007): gender (male/female), years as a faculty member (first-year/not first-year), and target (research or teaching, collegiality, expectations, balance). All of the emotion categories were more frequently reported by male faculty members, particularly negative-activating (81.8%) and negative-deactivating emotions (75%). All of the emotion categories were also more frequently reported by first-year faculty, although to a small degree as evidenced by negative-activating emotions (59.1%) being the most extreme difference. Finally, all of the emotion categories were present in relation to each target; however, a frequent target for all categories was balance (e.g., 45.4% negative-activating).

Also noted among the participants' responses were the appraisals that serve as antecedents of emotions described in Pekrun's (2006) theory, although these were less common. For example, new faculty members made statements related to control such as, "I work hard to be successful, produce papers, etc." and value such as "research is probably the most important part."

Participants also made a number of statements regarding emotions in general, typically pertaining to coping with emotions. For example, one first-year faculty member said, "I can't even deal with how I feel, I don't even have the time to deal with that right now." Another second-year faculty member said, "Compartmentalization to me is a psychological skill that I am not sure I actually have developed as much as other people, and involves emotions in some areas interfering with other areas..." Also, one faculty member described an issue relating to race and emotions, "We had a faculty meeting this morning and I just got pissed [angry] ...I got emotional. Now will it fit their stereotype of [black people] being emotional?"

In sum, new faculty members were found to frequently experience various emotions across the valence and activation categories specified in Pekrun's (2006) theory. The next step was to test the generalizability of these findings, specifically the frequency and breadth of emotions experienced among a larger sample of new faculty members, and to investigate the predictors and associated outcomes of their emotions. A quantitative data collection of new faculty emotions, hypothesized antecedents (control, value), and expected consequences (perceived success) was conducted the following year.

Quantitative Phase

Participants and Procedure

In the 2012 spring semester, 79 pre-tenured faculty members (out of a possible 188) from the same large, Midwestern USA research university as the focus groups were recruited to participate in an online survey via an e-mail containing a hyperlink. A small, single-institution sample was collected because this was an exploratory study to test the quality of measurements and generalizability of qualitative findings before engaging in larger data collections. In exchange for participation, faculty members had their names entered into 10 draws for \$50 and received a summary of the results. Completion of the survey took an average of 26.5 minutes.

The participants included 37 females and 41 males (1 missing), with an average age of 38.57 years ($SD = 8.67$), and 86.1% spoke English as their first language. Years of service were as follows: 17 first, 15 second, 15 third, 14 fourth, 9 fifth, 8 sixth year (1 missing). They represented 14 different disciplines (mode = 15 Social science), and had average contractually-expected efforts of 56.79% teaching, 30.95% research, and 10.74% service.

Measures

Emotions. New faculty members were asked, “In terms of TEACHING/RESEARCH, what EMOTIONS have you experienced this academic year (Aug 2011 to present)?” Based on the qualitative findings and Pekrun et al.’s (2011) Achievement Emotions Questionnaire, ten single-items (1 = *Not at all*, 10 = *Very much so*) measured emotions separately for teaching and research. The emotions differed along valence and activation dimensions: positive activating (enjoyment, hope, pride), positive deactivating (relief), negative activating (anger, anxiety, guilt, shame), and negative deactivating (helpless, boredom). Five emotions not mentioned in the qualitative focus groups (pride, relief, shame, boredom, helplessness) were included based on their prominence in emotion theories (Pekrun, 2006; Weiner, 1985). Many of these emotions are also socially undesirable to admit publically; therefore, participants may have been too self-conscious to mention these feelings during the focus groups (Kruger & Casey, 2009), but may indicate experiencing them privately during an online survey. Also, to reduce the length of the questionnaire a number of emotions identified in the focus groups were not surveyed, particularly those with low frequency in focus groups (e.g., envy) or similarity to other emotions included in the survey (e.g., relaxing \approx relief; happiness \approx enjoyment; worry \approx anxiety).

Control and value. Perceived control was assessed using four items adapted from the Perry, Hladkyj, Pekrun, and Pelletier (2001) Perceived Academic Control Scale (1 = *Strongly disagree*, 5 = *Strongly agree*). An example item is, “I have a great deal of control over my performance”, with each set of questions asked separately for teaching ($\alpha = .78$) and research ($\alpha = .82$). Value was assessed with a single item, “I look forward to doing this” (1 = *Strongly disagree*, 5 = *Strongly agree*), which was asked in regards to both teaching and research.

Success. Perceived success over the last academic year was measured with three items on a 10-point scale (1 = *Very Unsuccessful*, 10 = *Very Successful*). Self-report responses were

provided in relation to “Your own self standard”, “The tenure and promotion expectations of your department”, and “In comparison to other faculty with your rank in your department” separately for teaching ($\alpha = .67$) and research ($\alpha = .78$).

Predictors of new faculty success. Based on Author (2014), four scales measuring prominent factors believed to predict new faculty success were included in the online survey (see Appendix). Participants were instructed, “Based on your experiences at your current position over the last academic year, please indicate the extent to which you agree with the following statements” (1 = *Strongly disagree*, 5 = *Strongly agree*). Clarity of expectations were measured with five items, including “I understand what the job performance expectations are for me” ($M = 17.54$, $SD = 4.61$, $\alpha = .84$). Collegiality was assessed with six items, such as “My department is very supportive” ($M = 20.97$, $SD = 5.76$, $\alpha = .87$). Professional balance was comprised of four items, including “I have been able to balance my teaching, research, and service work” ($M = 11.18$, $SD = 3.56$, $\alpha = .79$). And personal balance was measured with five items, such as “I have been able to balance my work and personal life” ($M = 20.97$, $SD = 5.76$, $\alpha = .81$). All summed scales yielded normal distributions (skewness and kurtosis between ± 1.00).

Results

Mean differences. Several mean level differences between teaching and research emotions, control, value, and success were found using paired-sample *t*-tests (see Table 2). New faculty reported significantly more enjoyment, pride, control, and perceived success in the domain of teaching. They also reported teaching was slightly more boring than research. Conversely, new faculty members were found to experience significantly more anxiety, guilt, and helplessness in regards to research. This pattern suggests a more adaptive emotional pattern for teaching in comparison to research among new faculty members at this institution.

In line with the qualitative analyses, independent samples *t*-tests were also conducted to examine gender differences and length of time as professor (first year vs. not first year). Gender yielded only one significant difference for emotions, which was that male new faculty members felt significantly more anxious about teaching ($M = 6.08, SD = 2.42$) in comparison to females ($M = 4.93, SD = 2.59, t(76) = 2.06, p < .05$). Female new faculty members also valued teaching ($M = 4.50, SD = .61$) significantly more than males ($M = 3.80, SD = 1.08, t(64.65) = 3.54, p = .001$). Length of time as a professor returned two significant differences: First year faculty felt significantly less helpless ($M_{1st} = 1.88, SD = 1.09; M_{not1st} = 3.43, SD = 2.68, t(61.67) = -3.50, p = .001$) and less guilty ($M_{1st} = 2.00, SD = 1.90; M_{not1st} = 4.07, SD = 3.19, t(40.95) = -3.27, p < .01$) when compared to more senior members in regards to research. No differences were found on control or value when comparing first year to non-first year faculty members.

Correlations. A number of significant correlations among the study variables were also discovered (see Table 3). Importantly, a large number of emotions were significantly correlated with success in the domains of both teaching and research (16/20): the positive emotions correlating positively with success and the negative emotions negatively with success. In support of Pekrun's (2006) theory, a large number of the emotions significantly correlated with control and/or value: the positive emotions correlating positively with control and value, and the negative emotions correlating negatively with control and value. Emotions correlated more frequently and to a stronger degree with value in the domain of teaching (9/10) versus research (5/10). Anxiety was the only emotion not significantly correlating with control or value in either the teaching or research domain. Across the domains of teaching and research most of the negative emotions yielded small to moderate correlations (e.g., those who experienced more anxiety when teaching also felt more anxious when doing research), as did perceived control;

however, most of the positive emotions (enjoyment, hope, pride) did not correlate across domains, nor did helplessness or value.

Next the emotions were correlated with the predictors of new faculty success (see Table 4), which had noticeably different patterns across domains. In the teaching domain, collegiality and personal balance were correlated with many emotions (e.g., enjoyment, pride, anger, shame, guilt, boredom). Conversely, only anxiety was correlated with professional balance and no correlations between the emotions and expectations were found. The correlation pattern generally indicated that more positive and less negative emotions regarding teaching are present among faculty who report high levels of collegiality and personal balance.

In the research domain, nearly all of the emotions were related to professional balance with the exceptions of relief and helplessness. On the other hand, very few correlations were found among the emotions with expectancy, collegiality, and personal balance. This overall correlation pattern suggested that more positive and less negative emotions regarding research exist among faculty who report a high level of professional balance.

Mediation. Mediation analyses were conducted to assess the validity of Pekrun's (2006) Control-Value Theory of Emotions as it pertains to new faculty members. The tested model involved control and value as predictor variables, the 10 emotions individually as mediators, and perceived success as the outcome variable. The model was separately tested in the domains of teaching and research. Analyses involved three multiple regressions (Barron & Kenny, 1986): (1) control and value predicting emotions, (2) control and value predicting perceived success, and (3) control, value, and emotions predicting perceived success. Additionally, 95% bootstrap confidence intervals were used to assess the significance of mediational effects (Preacher & Hayes, 2004). In the current mediational models, a direct effect

is when control or value significantly predicts perceived success with no mediation by emotions. Complete (or full) mediation indicates that the direct effect of control or value on perceived success becomes non-significant when a particular emotion is included. Partial mediation indicates that control or value is mediated by an emotion to some extent, but that the direct effect is still significant. An indirect effect indicates that the direct effect (control or value → success) is not significant, but that a mediational effect is significant (control/value → emotion → success).

The results are presented in Table 5. In the domain of teaching (Figure 1), emotions were more frequently and more strongly predicted by value (8/10) in comparison to control (4/10). Control and value were both significant predictors of perceived success. After accounting for emotions, control was still had a significant, direct predictive effect on perceived success in all instances; in other words, emotions did not mediate the effect of control on success in the domain of teaching. Conversely, new faculty members' enjoyment and pride regarding their teaching completely mediated the relationship between value and success in teaching; in other words, professors who highly valued their teaching felt more enjoyment and pride regarding their teaching, and in turn reported more teaching success. New faculty members' boredom regarding their teaching partially mediated the positive relationship between value and success in teaching. The final model R^2 ranged from .38 to .44, indicating this model explained a notable portion of the overall variability.

In the domain of research (Figure 2), the experience of emotions was very different compared to teaching. Control was also a more common and stronger predictor of emotions (6/10) in comparison to value (3/10). Perceived control had a direct predictive effect on perceived success, while value did not predict research success. After accounting for emotions,

control was still a significant predictor of perceived success in all instances. Moreover, new faculty members' enjoyment, pride, shame, and helplessness partially mediated the effects of control on success in research; in other words, professors who felt more in control of their research felt a more adaptive array of emotions regarding their research, and in turn reported more research success. Also, despite no significant direct effects of value on success in research, value was found to indirectly predict perceived success via enjoyment and guilt. The final model R^2 ranged from .27 to .46, again indicating this model explained an important portion of the overall variability.

Discussion

An increasing demand combined with the challenge of retaining new professors is a critical issue for higher education institutions. Whereas much of the previous research on new faculty members' success has focused on established themes (Austin et al., 2007), we sought to examine a psychosocial variable gaining prominence in the educational research literature that has not been considered among university faculty—emotions. The impetus for the current study emerged when focus groups on new faculty members' success spontaneously yielded 76 statements referring to 18 discrete emotions. The emotions fell into a wide range of categories based on valence, activation, and domain. They were reported with similar frequency regardless of gender and years as a professor, although slightly more commonly by first-year, male professors. Adopting a pragmatic worldview (Onwuegbuzie & Leech, 2005), we further explored emotions using quantitative methodologies to confirm the applicability of Pekrun's (2006) emotion theory among this population.

The results from online surveys indicated that new faculty had more adaptive emotions regarding teaching, specifically more enjoyment and pride (although more boredom), whereas

research yielded reports of more anxiety, guilt, and helplessness. Correlations revealed nearly all of the emotions significantly related to perceived success in teaching and research. Moreover, high levels of perceived control were related to success in both domains, whereas high levels of value were more often related to teaching emotions. Also, teaching-related emotions prominently correlated with the established faculty success predictors of collegiality and personal balance, whereas research-related emotions correlated more frequently with professional balance. Finally, mediational analyses indicated that in the domain of teaching enjoyment and pride completely mediated the effect of value on success, while boredom partially mediated the effect of value on success. In the domain of research, enjoyment, pride, shame, and helplessness partially mediated the effects of control on success, while enjoyment and guilt facilitated indirect predictive effects of value on success in research. The implications of these findings for the research literatures on new faculty success, emotions, and higher education in general are discussed below.

Implications

As reported by Austin et al. (2007), the majority of past studies on new faculty success focused on three main themes: clarity of expectations, collegiality, and finding balance (professionally and personally). Quantitative studies suggested these factors explore a limited amount of variability in new faculty success (Harrison & Kelly, 1996; Olsen, 1993; Ponjuan et al. 2011; Sax et al., 2002; Author, 2014). Indeed, correlations in the current study found only personal balance to positively correlate with teaching success, and only professional balance to positively correlate with research success. These findings reinforce that more research is needed to understand the predictors of success for new faculty members.

Given the recent popularity of emotion studies among college students (Pekrun et al., 2002) and school teachers (Frenzel et al., 2009), it was predictable that emotions would also be pervasive among university professors (Neumann, 2006). Indeed, emotions were so highly salient that they emerged unprovoked during interviews on new faculty success. This study contributes to the few existing studies on new faculty members emotions (e.g., Harrison & Kelly, 1996; Kowai-Bell et al., 2012; Perry et al., 1997) by studying a wide range of discrete emotions, comparing the domains of teaching and research, and utilizing both qualitative and quantitative methodologies to demonstrate their significant relationship success. This was also the first study to examine Pekrun's (2006) control-value theory of emotions among university professors, which was found to be a highly applicable framework among this population.

A recurring finding was the importance of the domain in which the emotions were measured. For example, emotions for teaching were generally more positive (although boredom was higher for teaching than research), teaching-related emotions more strongly related to collegiality and personal balance, and several teaching-related emotions mediated the relationship between value and perceived success in teaching. Alternatively, emotions for research were less positive and more negative, research-related emotions more strongly related to professional balance, and several research-related emotions partially mediated the relationship between control and perceived success in research. These results clearly suggest that domain is critical whenever considering the frequency, antecedents, and outcomes of new faculty members' emotions.

A comparison of qualitative and quantitative results indicates similarities and differences across methodologies. Results from both methods indicated that a wide range of discrete emotions are commonly experienced and important to new faculty members, as evidenced by

their high frequency and pervasive impact. Both methodologies also revealed positive-activating emotions to be the most common (e.g., enjoyment), followed by negative-activating emotions (e.g., anxiety, guilt). A key difference in the findings across methodologies was that the target of emotions reported in the qualitative findings was predominantly in regards to balance. In the quantitative data collection, however, we chose to focus solely on the domains of teaching and research as these are the areas higher education typically values the most in new faculty members. This difference was addressed in part by correlating the emotions with the predictors of new faculty success, although further research on how emotions influence the established predictors of new faculty success is warranted.

At a more practical level, our results suggest that efforts to increase new faculty members' success could focus on promoting the experience of more positive-activating emotions (e.g., enjoyment, hope, pride) and less negative emotions (both activating [anxiety, shame, guilt] and deactivating [boredom, helpless]). An important implication of the current study is a suggested mechanism for fostering more adaptive faculty emotional patterns. For instance, universities that implement mentoring programs may wish to specifically encourage new faculty members to see the value in their teaching and feel more in control of their research outcomes. The identification of an unrecognized factor that predicts the success of new faculty, namely emotions, represents a potentially new avenue to improve faculty development and retention; although more empirical research is needed to replicate these findings and improve upon the current study's limitations.

Limitations and Future Directions

The current study was exploratory in nature, which yielded several issues that should be considered when interpreting the results. For example, as the current study emerged

spontaneously when studying new faculty member success, future studies should involve individual interviews with faculty members specifically about their emotions for teaching, research, and their career more generally. Such data would allow for a more in-depth qualitative analysis (e.g., constant comparative analysis) and provide more context for how emotions are triggered and their impact on new faculty members' success.

The sample size for the quantitative data collection was less than recommended (e.g., Onwuegbuzie, Jiao, & Bostick, 2004), although there was still suitable statistical power to identify many meaningful effects. Also, the participants were all recruited from one campus, which limits the generalizability of the findings. These sampling limitations are opportunities for further research involving the collection of data with larger samples across a more diverse set of institutions. This will enable the consideration of institutional factors (e.g., research vs. teaching emphasis) and utilization of stronger analytic methods (e.g., multi-level modeling across institution type) to more stringently explore the current research objectives.

Additional considerations should be made regarding measurement. The emotions, for instance, were measured with single items in order to explore a wider range of emotions while keeping the overall length of the survey manageable; however, while the use of single item questions is common, it is problematic as they cannot be assessed for reliability in a cross-sectional design.³ Pekrun et al. (2011) developed the Achievement Emotions Questionnaire to assess students' emotions with multiple items, which has been demonstrated to have good reliability and validity. Future studies could be conducted in which several of these emotions scales are adapted for faculty members. The quantitative data collection also did not capture all of the emotions mentioned in the focus groups. The 10 emotions of the present study were selected based on their coverage of the valence and activation components of Pekrun's (2006),

and included several emotions that may have been too socially undesirable to mention in interviews (e.g., pride, shame, boredom). Future researchers could quantitatively measure a larger number of emotions identified in the focus groups, such as envy and loneliness. Despite these limitations, the results of the current study were encouraging in identifying a rarely considered factor in the success of new faculty members and may serve as a catalyst for future research in this area.

Footnotes

¹ Reports of general positive (“feeling good”) and negative (“feel terrible”) affect were also found, but were excluded from the current analysis.

² In the qualitative analysis, enjoyment and happiness were counted as separate emotions because enjoyment typically occurs during an activity (i.e., activity focused), whereas happiness typically occurs after an outcome (i.e., outcome focused; Pekrun, 2006).

³ Other prominent constructs that have been measured by single items including student ratings of instructors (Abrami & d’Apollonia, 1991), self-esteem (Robins, Hendin, & Trzesniewski, 2001), course interest (Ainley & Patrick, 2006), quality of life (Zimmerman et al., 2006), self-reported health (DeSalvo et al., 2006), and job satisfaction (Wanous, Reichers, & Hudy, 1997).

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Table 1

Frequency Count and Categorization of Reported Emotions from Focus Groups

Valence	Activation	Emotion	Frequency	Gender (Male)	1 st Year	Target ^a			Balance
						Research/Teach	Collegiality	Expectations	
Positive	Activating	Enjoyment	12	6	8	2	3	2	3
		Love	10	7	7	4	1	2	2
		Happiness	8	3	2		1		5
		Hope	8	5	3	1		3	2
		Excitement	1	0	0			1	
		Total/Percent	39	53.8%	51.3%	17.9%	10.3%	20.5%	30.8%
Positive	Deactivating	Comfortable	6	3	4	1	2	1	1
		Relaxing	1	1	0				1
		Total/Percent	7	57.1%	57.1%	14.3%	28.6%	14.3%	28.6%
Negative	Activating	Worry	7	6	4			4	2
		Guilt	7	6	7	1			7
		Frustration	3	1	1		1	1	1
		Anger	2	2	1		2		
		Anxiety	1	1	0	1			
		Envy	1	1	0		1		
		Unhappiness	1	1	0		1		
		Total/Percent	22	81.8%	59.1%	9.0%	22.7%	22.7%	45.4%
Negative	Deactivating	Sadness	3	3	0	1	2		
		Regret	2	1	1		1		
		Loneliness	2	1	2				2
		Disappointment	1	1	1				1
		Total/Percent	8	75%	50%	12.5%	37.5%	0%	37.5%

^a Emotions not relating to the selected targets were excluded from the table; thus, numbers for emotions across all targets does not equal 100%.

Table 2

Descriptive Statistics for Emotions, Control, Value, and Perceived Success

Variable	Teaching		Research		<i>M</i> diff.	<i>t</i>
	<i>M</i> (<i>SD</i>)	Range	<i>M</i> (<i>SD</i>)	Range		
Enjoyment	8.00(1.84)	2-10	7.32(1.90)	2-10	.68	2.38*
Hope	7.49(1.87)	1-10	7.32(2.00)	2-10	.16	0.54
Pride	7.77(2.08)	1-10	7.09(2.20)	1-10	.68	2.15*
Anger	4.04(2.59)	1-10	3.41(2.59)	1-10	.63	1.70
Anxiety	5.36(2.52)	1-10	6.49(2.95)	1-10	-1.12	-2.89**
Shame	2.33(2.22)	1-10	2.25(2.26)	1-10	.08	0.30
Guilt	2.77(2.25)	1-10	3.59(3.06)	1-10	-.81	-2.63**
Relief	4.73(2.40)	1-10	4.51(2.86)	1-10	.23	0.73
Helpless	2.25(2.05)	1-10	3.08(2.49)	1-10	-.83	-2.43*
Boredom	2.32(1.96)	1-10	1.91(1.57)	1-10	.41	2.11*
Control	16.92(2.84)	6-20	16.19(3.09)	6-20	.73	1.83
Value	4.14(0.95)	1-5	4.08(0.91)	1-5	.05	0.33
P. success	23.48(3.81)	11-30	20.11(5.83)	3-30	3.37	4.57**

Note. Degrees of freedom for t-tests were 73 or 74.

* $p < .05$, ** $p < .01$ (two-tailed)

Table 3

Online Survey Variable Correlations between Emotions, Control, Value, and Success

	Teaching			Research			Teaching & Research
	Control	Value	Success	Control	Value	Success	
Enjoyment	.47**	.67**	.57**	.49**	.44**	.63**	.12
Hope	.45**	.62**	.44**	.37**	.33**	.48**	.13
Pride	.38**	.56**	.48**	.44**	.24*	.55**	.18
Anger	-.32**	-.40**	-.19	-.42**	-.06	-.29*	.24*
Anxiety	-.19	-.21	-.33**	-.20	-.22	-.38**	.26*
Shame	-.45**	-.51**	-.37**	-.41**	-.20	-.57**	.46**
Guilt	-.33**	-.47**	-.31**	-.16	-.36**	-.37**	.53**
Relief	.02	.27*	.08	.16	.10	.30**	.49**
Helpless	-.49**	-.33**	-.44**	-.51**	-.20	-.42**	.17
Boredom	-.19	-.48**	.00	-.04	-.33**	-.12	.56**
Control	-	.44**	.54**	-	.40**	.49**	.32**
Value	.44**	-	.51**	.40**	-	.28**	-.12

* $p < .05$, ** $p < .01$ (two-tailed)

Table 4

Online Survey Variable Correlations between Emotions and Predictors of New Faculty Success

	Teaching				Research			
	Expectations	Collegiality	Professional Balance	Personal Balance	Expectations	Collegiality	Professional Balance	Personal Balance
Enjoyment	.13	.34**	.02	.29*	.14	-.05	.40**	.21
Hope	.12	.19	.03	.09	.01	-.06	.39**	.13
Pride	.15	.45**	-.03	.30**	.14	.03	.25*	.17
Anger	-.10	-.30**	-.19	-.19	-.26*	-.26*	-.38**	-.23*
Anxiety	-.14	-.18	-.44**	-.38**	-.15	-.12	-.47**	-.20
Shame	-.04	-.43**	-.19	-.29**	-.10	-.20	-.32**	-.20
Guilt	-.13	-.42**	-.20	-.35**	-.26*	-.17	-.38**	-.21
Relief	-.09	-.13	.04	.02	-.11	-.08	.01	.08
Helpless	.19	.19	-.18	.01	.23	.08	.04	.02
Boredom	.14	-.23*	-.18	-.34**	.09	-.08	-.32**	-.17
P. Success	.09	.21	.12	.32**	.17	-.08	.41**	.05

* $p < .05$, ** $p < .01$ (two-tailed)

Table 5

Tests of Mediation Relationships

Emotion	Control, value → emotion		Control, value → success	Control, value, emotion → success			95% Bootstrap CI ^a		Control, value → Success: Predictive effect ^b		Final model R ²	
							Control	Value				
<i>Teaching</i>												
Enjoyment	.21*	.58***	.39***, .34**	.32**	.14,	.34*	-.05,	.20	.12,	1.59	direct, complete	.44
Hope	.23*	.51***		.37***	.29*	.10	-.03,	.12	-.30,	.70	direct, direct	.38
Pride	.16,	.49***		.36***	.22,	.23*	-.05,	.14	.03,	1.25	direct, complete	.41
Anger	-.20,	-.32**		.40***	.36*	.06	-.09,	.03	-.37,	.19	direct, direct	.38
Anxiety	-.14,	-.15		.36***	.31**	-.22*	-.04,	.15	-.17,	.36	direct, direct	.42
Shame	-.28**	-.39***		.38***	.32**	-.04	-.10,	.11	-.28,	.66	direct, direct	.38
Guilt	-.15,	-.41***		.38***	.32**	-.04	-.08,	.07	-.25,	.66	direct, direct	.38
Relief	-.14,	.33**		.38***	.36**	-.05	-.04,	.07	-.44,	.24	direct, direct	.38
Helpless	-.44***	-.14		.33**	.30**	-.15	-.09,	.33	-.15,	.52	direct, direct	.39
Boredom	.04,	-.49***		.38***	.47***	.29**	-.11,	.15	-1.11,	-.08	direct, partial	.44
<i>Research</i>												
Enjoyment	.38***	.29**	.47***, .08	.25*	-.08,	.55***	.13,	.77	.12,	2.60	partial, indirect	.46
Hope	.29*	.21		.37**	.00,	.35**	.00,	.52	-.16,	1.63	direct, ns	.36
Pride	.41***	.07		.30**	.05,	.43***	.08,	.67	-.48,	1.39	partial, ns	.41
Anger	-.47***	.13		.42**	.09,	-.11	-.10,	.34	-.44,	.12	direct, ns	.27
Anxiety	-.13,	-.16		.46***	.01,	-.31	-.12,	.25	-.33,	1.16	direct, ns	.36
Shame	-.39***	-.05		.29*	.06,	-.46***	.04,	.65	-.43,	.93	partial, ns	.43
Guilt	-.02,	-.36**		.49***	-.06,	-.36***	-.27,	.17	.20,	1.89	direct, indirect	.37
Relief	.14,	.04		.43***	.07,	.22*	-.05,	.24	-.52,	.67	direct, ns	.31
Helpless	-.51***	.00		.34**	.08,	-.25*	.01,	.61	-.37,	.40	partial, ns	.30
Boredom	.11,	-.37**		.49***	.04,	-.10	-.13,	.06	-.56,	1.22	direct, ns	.27

^a Mediation effect present if range between lower and upper bound of confidence interval does not include zero.

^b Direct = control/value predicts success with no mediation by emotions, complete = control/value prediction of success completely mediated by emotion, partial = control/value prediction of success partially mediated by emotion, indirect = control/value prediction of success mediated by emotion with no initial direct effect, ns = control/value does not predict success.

Note. Standardized Beta (β) regression coefficients presented with exception of unstandardized coefficients in confidence intervals.

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed)

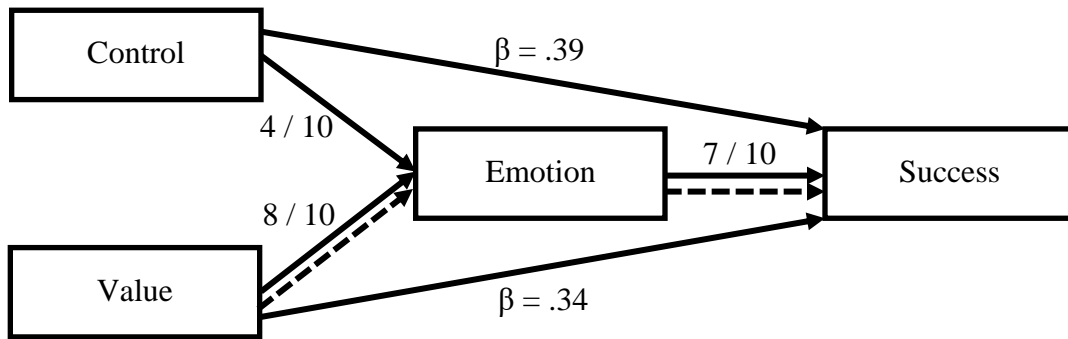


Figure 1. Summary of control-value theory mediational model of teaching emotions. Significant direct predictive effects represented by solid lines and significant mediational effects by dotted lines. Coefficients for paths leading to and from emotions indicate number of significant direct effects among the 10 emotions tested.

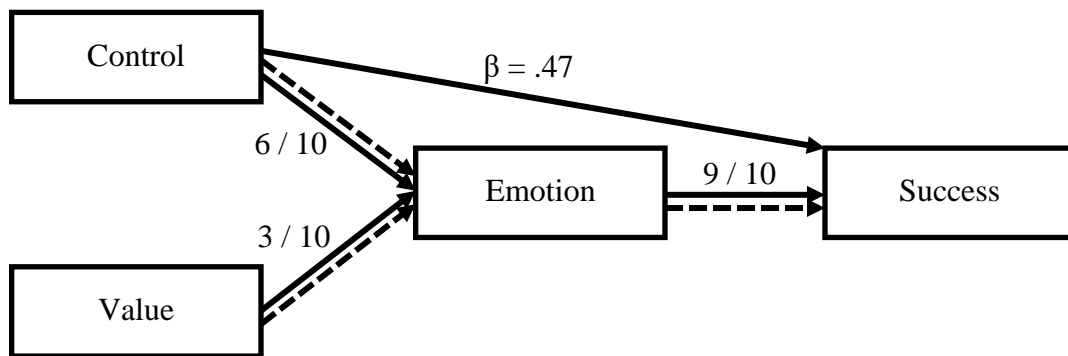


Figure 2. Summary of control-value theory mediational model of research emotions. Significant direct predictive effects represented by solid lines and significant mediational effects by dotted lines. Coefficients for paths leading to and from emotions indicate number of significant direct effects among the 10 emotions tested.

Appendix

Predictors of New Faculty Success Scales

Name	Scale and items
	<i>Expectations</i>
nf_exp1	I understand what the job performance expectations are for me.
nf_exp2	I desire more clarity on what the standards for success are at my work. R
nf_exp3	I know exactly what I need to do to get tenure and promotion.
nf_exp4	I received sufficient feedback on my progress towards tenure and promotion.
nf_exp5	I would like more transparency in my performance review process. R
	<i>Collegiality</i>
nf_coll1	My department is very supportive.
nf_coll2	I have found dealing with the politics of my department stressful. R
nf_coll4	At times I have wondered who I can trust in my department. R
nf_coll5	I have found it challenging to work with the other faculty in my department. R
nf_coll6	I have a supportive department chair.
nf_coll8	I often feel separated from the other faculty in my department. R
	<i>Professional Balance</i>
nf_probal1	I have been able to balance my teaching, research, and service work.
nf_probal3	I have figured out how to efficiently use my time at work.
nf_probal4	Managing my teaching, research, and service work is very challenging. R
nf_probal5	It is easy for me to find enough time to do all of my work.
	<i>Personal Balance</i>
nf_perbal1	I have been able to balance my work and personal life.
nf_perbal3	I have found time to have fun outside of work.
nf_perbal4	I often feel like my job is my life. R
nf_perbal5	I have been able to live a healthy lifestyle while working at this job.
nf_perbal6	At times I have compromised my health for my work. R