Examining the Factors Impacting Academics' Psychological Well-Being: A Review of Research

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Abstract

Existing research suggests that academics are subjected to high levels of job-related stress. Numerous aspects of an academic career such as time constraint, work overload, work-life conflict, and emotional demands are stressful and trigger negative emotional responses. There is further evidence to suggest that job-related stress compromises physical and psychological well-being, and impairs productivity among academics. The purpose of the present paper was to review the empirical research on how work-related stress and experiences impact academics' psychological well-being. Accordingly, a thorough review of the literature was conducted and 46 studies attending to aspects of psychological well-being were identified and analyzed. The literature was found to be fragmented. The review concludes that job-related stress and specific types of experiences adversely impact academics' psychological well-being by making them vulnerable to psychological distress, negative emotions, depression, and burnout. Implications for improving psychological well-being among academics are addressed and directions for future research are proposed.

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1. Introduction

1.1. What is the Problem?

Academics, not unlike other professionals, are subjected to high levels of job-related stress (Tytherleigh, Webb, Cooper, & Ricketts, 2005). Internationally, academia has undergone fundamental changes over the last 20 years. Globalization, competition due to political and economic changes, eroded job security, and the ubiquity of information technology (Lundberg & Cooper, 2010) have changed employment in higher education as in other contexts (Biron, Brun, & Ivers, 2008; Kinman, 2014). The adoption of New Public Management (NPM) principles from the private sector that emphasize the centrality of the customer as well as accountability for results (Pollitt & Bouckaert, 2004), major educational reforms, expansion and access, the move towards commercialization (e.g., decreased focus on humanities vs. profit margins), and reduction in funding resources have thrust higher education into the competitive business arena (Constanti & Gibbs, 2004; Ogbonna & Harris, 2004). Added to these changes are the varied demands of the academic profession, involving the simultaneous performance of disparate tasks including teaching, supervising, undertaking research, and providing service (Fisher, 1994; Kinman, 2014). The increased demands for efficacy and accountability (Anderson, 2006) have put unprecedented levels of pressure on academia in general and academics in particular (Catano *et al*., 2010; Kinman, 2014). The cumulative result of these changes to the academic landscape have accordingly resulted in increased vulnerability to job-related stress, reduced physical and psychological well-being, and impaired performance (Beehr & Franz, 1987; Kinman, 2001).

Given the significance of well-being for job performance and productivity (Ford, Cerasoli, Higgins, & Decesare, 2011) in general, and psychological well-being in particular, the purpose of the present paper was to review the literature on how work-related stress and experiences impact academics' psychological well-being. The term *academic* has been previously used in the literature to refer to all faculty (e.g., tenured, untenured, full-time, part-time lecturers, etc.), graduate students, and research and teaching assistants. Our focus in this review is specifically on the experiences of tenured and tenure-track faculty members engaged in full-time teaching and/or research and their job-related stress, hereafter referred to as stress.

Occupational stress is conceptualized as "the inability of the individual worker to cope effectively with various work demands" (Blix, Cruise, Mitchell, & Blix, 1994, p. 158). As a triggering element, a stressor more specifically refers to "an environmental condition or event in the workplace that causes strain" (Beehr & Franz, 1987, p. 6). Several national and large-scale surveys of academics confirm Fisher's (1994) observation that "psychological stress is a feature of occupational life for academics" (p. 68; Catano *et al*., 2010; see also Shen *et al*., 2014; Sun, Wu, & Wang, 2011; A. H. Winefield *et al*., 2003). Not only have academics' self-reported stress levels increased in recent years, they now also exceed those of other professional groups and the general population (Barkhuizen & Rothmann, 2008; Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Mark & Smith, 2012; Tytherleigh *et al*., 2005; A. H. Winefield *et al*., 2003). More specifically, whereas recent large-scale surveys of academic staff show the proportion of those who perceive their job as stressful to have increased significantly over the past two decades (e.g., U.K.: Kinman, 2001; Kinman & Jones, 2004; Australia: Gillespie *et al*., 2001; T. Winefield, Boyd, Saebel, Pignata, 2008), findings consistently show faculty to report higher stress levels than other university staff and the general public (A. H. Winefield *et al*., 2003). Similarly, comparisons of caseness (i.e., when an intervention is required) among U.K. and Australian academics reveal that academics suffer from greater need for psychological intervention as compared with other occupational groups (e.g., university staff) and community samples (Kinman, 2014).

Research findings from several countries such as Australia (A. H. Winefield *et al*., 2003), Canada (Biron *et al*., 2008; Catano *et al*., 2010), the U.K. (Tytherleigh *et al*., 2005), and elsewhere (e.g., China; Sun *et al*., 2011) have uniformly identified numerous stressful aspects of the academic profession. Time constraint, work overload, role conflict and ambiguity, pursuit of tenure, work–life conflict, teaching, emotional demands, interaction with large numbers of students, pressure to publish, lack of support, and

unsatisfactory work relationships are among the factors that emerge consistently across cultures and contexts (for a review, see Kinman, 2001).

The adverse consequences of stress on academics is very similar to the impact stress has on performance of employees (e.g., Edwards, Guppy, & Cockerton, 2007) and on physical and psychological health across other occupational groups (e.g., Dormann & Zapf, 1999; Ford *et al*., 2011; Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010). In other words, the general stress literature aligns directly with the growing body of research on academic employment in showing that despite the freedom and opportunity afforded to academics, stress is present and more importantly has debilitating consequences on their psychological and physical health (e.g., Catano *et al*., 2010; Shen *et al*., 2014), job performance, productivity, and student learning (Blix *et al*., 1994; Gillespie *et al*., 2001; Stevenson & Harper, 2006).

1.2. Psychological Well-Being and its Relevance to Academics

Psychological well-being contributes significantly to employees' performance, productivity, as well as health (for a meta-analysis see Ford *et al*., 2011; Häusser *et al*., 2010) and is typically operationalized according to two overlapping perspectives: hedonic and eudemonic (Deci & Ryan, 2008). The hedonic approach is mainly concerned with the experience of positive emotions or increasing pleasure and, conversely, the absence of negative emotions or decreasing pain. In contrast, the eudemonic approach centers primarily on life satisfaction and the actualization of one's personal potential (Diener, Suh, Lucas, & Smith, 1999; Ryan & Deci, 2001). Drawing on both these streams, a recent meta-analysis by Houben, Van Den Noortgate, and Kuppens (2015) defines psychological well-being as:

> *a broad construct that involves either or both the presence of positive indicators of psychological adjustment such as positive emotionality, happiness, high self-esteem, or life satisfaction, and the absence of indicators of psychological maladjustment such as negative emotionality, psychopathological symptoms and diagnoses* (p. 1).

Given the significance of psychological well-being, greater knowledge of the ways in which work-related stress compromises academics' psychological well-being is important for two reasons. First, academics play a fundamental role in the creation and development of knowledge as the primary resource of a university (Gmelch, Lovrich, & Wilke, 1984). Second, academics transform the lives of students and promote the quality of life in society (Johnsrud, 2008). It can thus be inferred that psychological well-being among academics is foundational to educational quality with conditions that undermine their well-being also having a negative impact on their students. Additionally, given the lost time and resources to help faculty cope (e.g., psychological, medical), the financial costs for post-secondary institutions may be substantial.

1.3. The Present Review

To date, most research attention has been devoted to academics' job performance and accountability with little emphasis given to how faculty are faring psychologically. Furthermore, the literature on this topic appears to be fragmented with no reviews of empirical research conducted on the topic to date. The current state of this literature thus highlights the need for an overarching review to integrate relevant findings. Within this context, the present review attempts to address this gap by integrating the findings of quantitative and qualitative research on the stress and psychological well-being of academics. More precisely, it aims to synthesize empirical evidence on the ways in which work-related stress and experiences compromise academics' psychological well-being.

Findings from this review generate insight as to the different ways in which academics are affected by their professional practice and also shed light on how to protect their psychological health by circumventing the conditions that compromise it. As such, this review highlights the consequences of work-related stress and experiences for psychological health among academics and outlines findings relevant to optimal stress reduction approaches. Accordingly, these findings should help to inform efforts

by post-secondary institutions to protect and boost psychological well-being in faculty so as to better enable them to achieve their instructional, research, and professional goals.

1.4. Psychological Well-Being Indicators in the Current Review

Psychological well-being is a broad construct (Houben *et al*., 2015) although reserach on the construct has typically examined a subset of variables comprising well-being. In selecting the psychological well-being indicators for examination in this review, three meta-analytical reviews were consulted (Ford *et al*., 2011; Houben *et al*., 2015; Schmitt, Branscombe, Postmes, & Garcia, 2014). These reviews highlight both positive and negative indicators of psychological well-being including positive emotionality, life satisfaction, self-esteem, and extraversion as well as negative emotionality, depressive symptoms, anxiety, neuroticism, and psychological distress, fatigue, and personality disorders.

Given that this review set out to determine the manner in which stress and work experiences adversely impact psychological health among academics, the focus is primarily on negative indicators and more specifically, psychological distress, depression, burnout, and negative emotions. Burnout syndrome was included based on the rationale that it involves negative emotionality and fatigue, as discussed later in the paper. As for negative emotions specifically, Kinman's review (2001) of the impact of stress on academics' well-being did not provide a thorough analysis of negative emotions, and no review to date has examined the topic.

With respect to the underlying conceptual framework, the present review was guided by the Job Demands-Resources (J D-R) model, a leading job stress conceptual framework that allowed us to explore the adverse impact of stress and work experiences on psychological well-being. The J D-R model proposes that two different underlying psychological processes determine the development of job-related strain and motivation. The first process concerns health impairment in that it is assumed that chronic job demands (e.g., work overload, emotional demands, etc.) contribute to physical and psychological health challenges in employees due to exhaustion. In contrast, the second process refers to the compensatory availability of job resources that can help to sustain work-related motivation, reduce cynicism, and improve performance. The J D-R model further highlights the interaction of demands and resources such that job resources are expected to buffer the negative impact of work demands on psychological strain (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011). Consistent with research based on the J D-R model that to date has focused primarily on the job demands component in predicting psychological well-being (e.g., Rothmann & Essenko, 2007; Hakanen, Bakker, & Jokisaari, 2011), the present review similarly focuses on impact of job demands and stressors on mental health outcomes in academic populations.

2. Methodology

2.1. Inclusion and Exclusion Criteria

A systematic search was conducted in the electronic databases of the Educational Research Information Center (ERIC), Psychological Information (PsycINFO), Web of Science, and Scopus. Every search term[1] was entered in combination with one or two additional search terms. To avoid "unexplained selectivity" (Dunkin, 1996), the following inclusion and exclusion criteria were applied to refine the database search.

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[1] The keywords used to locate the relevant studies included: ("college*" OR "university") AND ("college faculty" OR "college teacher*" OR "college professor*" OR "university lecturer*" OR "university teacher*" OR "university professor*" OR "faculty member*" OR "professor*" OR "faculty" OR "lecturer*) AND ("stress" OR "occupational stress" OR "work stress" OR "job stress" OR "stress variable*" OR "stressor*" OR "challenge*") AND ("wellbeing" OR "well-being" OR "burnout" OR "anxiety" OR "depression" OR "psychological distress" OR "strain") AND ("affect" OR "emotion*" OR "mood" OR "feel*").

First, because reports, conference papers, non-peer-reviewed studies, and peer-reviewed studies may not be equivalent in rigor, the search included only peer-reviewed empirical investigations so as to avoid "lack of discrimination" and ensure robustness of conclusions (Dunkin, 1996; Oxman, 1994). Second, to maintain a reasonable scope, only studies addressing psychological well-being among academics conducted within the last 20 years were included. This decision was based on fundamental changes in the demands placed on academics over the past 20 years (Kinman, 2014) and an existing review by Kinman (2001) of studies conducted prior to 2001. The selected time frame minimized overlap with existing work.

Third, the present review excluded literature pertaining to medical and clinically based academics as well as faculty who were also social workers on the grounds that they experience qualitatively different work conditions than non-medical academics because of their hospital appointments and clinical instruction and practice responsibilities (e.g., Le Blanc, Bakker, Peeters, van Heesch, & Schaufeli, 2001; Watts & Robertson, 2011). Fourth, the review also excluded studies that reported aggregated findings from combined groups of faculty and general university staff (e.g., Gillespie *et al*., 2001; Jacobs, Tytherleigh, Webb, & Cooper, 2010; Mark & Smith, 2012; Rothmann, Barkhuizen, & Tytherleigh, 2008; A. H. Winefield & Jarret, 2001; A. H. Winefield *et al*., 2003) or faculty and other professions such as engineers and hospital doctors (Tian & Wang, 2005). As the work conditions and tasks for these professionals are not the same, it is essential to isolate the factors that relate specifically to academics. Given the aggregate nature of the data reported, it was not feasible to determine what proportion of the findings was specific to faculty. Fifth, since the review aimed to investigate the effects of stress and work experiences on psychological well-being among academics, only studies that reported empirical data on the association between stress and work experiences, and negative indicators of psychological health, were included. Finally, only studies published in the English language were included. In addition to database searches, a snowball technique was used to obtain articles indicated in the reference lists of articles retrieved from the database search.

2.2. Search Results

The database and manual searches collectively yielded 46 studies that met the inclusion criteria. Among these, 28 studies employed a quantitative approach, 14 were qualitative in nature, and four studies utilized a mixed-methods approach. Of the 17 studies that examined academics' emotions, only nine had emotions as their primary focus (Gates, 2000; Hagenauer & Volet, 2014; Lahtinen, 2008; Löfström & Nevgi, 2014; Martin & Lueckenhausen, 2005; Postareff & Lindblom-Ylänne, 2011; Regan *et al*., 2012; Smith, Cronin, & Kessler, 2008; Stupnisky, Pekrun, & Lichtenfeld, 2016). Interestingly, seven of these nine studies were conducted between 2008 and 2014, suggesting that research on academics' emotions is an emerging research topic. In the remaining eight studies on faculty emotions (Boice, 1991; Greene *et al*., 2008; Harrison & Kelly, 1996; Mullen & Forbes, 2000; Nir & Zilberstein-Levy, 2006; Simmons, 2011; Solem & Foote, 2004; Whitt, 1991), emotions were only tangentially examined. A list of studies included in this review can be found in Tables 1, 2, and 3. Included studies have been identified with an asterisk in the reference list.

3. Review of Research on Psychological Well-Being in Academics

As outlined below, the findings of the present review are consistent with the health impairment risks of job-related stressors as proposed in the J D-R model in highlighting the deleterious effects of stressors on psychological well-being among academics. More specifically, the studies reviewed unanimously suggest that stress and specific elements of academic work are associated with poor psychological health with respect to psychological distress, anxiety, depression, burnout, and negative emotions. Further, study findings indicate that poor psychological well-being can itself be associated with additional negative consequences, with the following sections outlining the consequences of stress across multiple aspects of psychological health in academic populations.

Table 1

Studies on Stress, and Psychological Well-being (PWB), Psychological Distress, and Depression of Academics (n = 13)

Author, Date	Focus/ Question	Context / Sample	Paradigm / Method / Data source	Findings	Limitations
Barkhuizen & Rothmann (2008)	To identify the indicators of occupational stress and to investigate whether stressors predict ill-health and a lack of organizational commitment	South Africa, 595 academics at six universities	Quantitative, cross-sectional, questionnaire	• Work overload and work-life balance contributed significantly to ill-health • Occupational stressors including overload, job control, lack of resources and communication significantly impacted organizational commitment	• Cross-sectional design • Self-report measures
Catano et al. (2010)	To explore the level of occupational stress and its impact on work and health-related outcomes	Canada, a national study of 1440 faculty members at 56 universities	Quantitative, cross-sectional, questionnaire	• Stressors detrimentally impact job satisfaction, affective commitment to the institution, as well as physical and psychological health • 13% reported high levels of psychological distress due to stress • Work-life imbalance emerged as the main predictor of increased psychological distress	• Low response rate (27%) • Self-report • Cross-sectional

Hogan et al. (2014)	To examine the effects of organizational factors on work hours, work-life conflict and psychological strain	Ireland, 410 academics at three Irish universities	Quantitative, cross-sectional, questionnaire	• Higher levels of work-life conflict were associated with higher levels of psychological distress	• Cross-sectional design • Self-reported data • Low response rate (23%) causes concerns about self-selection and non-response bias
Kataoka et al. (2014)	To examine occupational stress and its related factors	Japan, 337 university teachers at one university	Quantitative, cross-sectional, questionnaire	• Stress was associated with high levels of anxiety and depression	• A single-site study • Cross-sectional design
Kinman (2008)	To examine the association between job stressors and psychological and physical health symptoms	UK, a national survey of 465 faculty members	Quantitative, cross-sectional, questionnaire	• Found significant relationships between stressors and health outcomes • Stressors relating to time constraints, support, influence, and work–home interface demands had the strongest associations with health outcomes	• Cross-sectional design • Self-report data
Kinman & Jones (2003)	To explore the association between stressors and psychological distress and job dissatisfaction	UK, a national study of 782 academics	Mixed-methods study (questionnaire and open-ended questions)	• 53% achieved borderline levels of depression and anxiety and 21.8% reported serious levels of depression and anxiety • Psychological distress was negatively associated with job satisfaction • Work-life conflict was the main predictor of psychological distress	NA

Kinman & Jones (2008a)	To examine the effects of effort-rewards imbalance on psychological distress, physical health, job satisfaction, and leaving intentions	UK, a national study of 844 academics	Quantitative, cross-sectional, questionnaire	• Efforts-rewards imbalance was significantly associated with strain including poor physical and PWB, job satisfaction and leaving intentions	• Cross-sectional • Self-reports
Kinman & Jones (2008b)	-To examine work demands, work-life balance, and well-being	UK, a national study of 844 academics	Quantitative, cross-sectional, questionnaire	• Poor work-life balance was negatively associated with PWB	• Cross-sectional • Self-reports
Leinbaugh et al. (2003)	To examine issues that encourage or discourage educators to continue as faculty members	USA, a national survey of 230 counselor educators	Quantitative, cross-sectional, questionnaire	• Lack of control was a source of occupational stress and was shown to be negatively associated with life satisfaction	• Majority (85%) were White Americans and the results may not be generalizable to minority groups
McCoy et al. (2013)	To examine the role of an institution's environmental conditions in faculty well-being (i.e., job satisfaction, intent to leave, emotional and physical health)	US, 242 faculty members at one university	Quantitative cross-sectional, questionnaire	• Perceptions of institutional support was associated with higher levels of well-being and vice versa	• Being single-site • Cross-sectional
Shen et al. (2014)	To examine the association between occupational stress and depressive symptoms	China, 1210 university teachers at six universities	Quantitative, cross-sectional, questionnaire	• 58.9 % depressive symptoms rate • Stress was positively associated with depressive symptoms • Effort-reward imbalance was positively associated with depression	• Reliance on self-report data

Slišković et al. (2011)	To examine the relationship between sources of occupational stress, work locus of control, attitudes towards work, and well-being of university teachers	Croatia, 1170 university teachers at four universities	Quantitative, cross-sectional, questionnaire	• Pressures arising from the work with students had a direct effect on PWB, physical health, and work satisfaction, but the effects on organization satisfaction were fully mediated by level of work locus of control • Social conditions of work directly contributed to the PWB	• Cross-sectional • Self-report data
Sun et al. (2011)	To assess occupational stress and its risk factors	China, 827 university teachers at eight provinces	Quantitative, cross-sectional, questionnaire	• Stressors were significantly associated with PWB	• Self-report data • Cross-sectional

Table 2

Studies on the Association between Stress and Burnout among Academics (n = 16)

Author, Date	Focus / Question	Context / Sample	Paradigm / Method / Data source	Findings	Limitations
Anderson (2006)	To explore the ways in which recent managerial changes in Australian universities affect academics' experiences of their working lives	Australia,27 academics, eight universities	Qualitative study, interview	Constraints resulting from work overload were found to be associated with burnout	NA
Barkhuizen et al. (2014)	To investigate the relationships among job demands and resources, burnout, work engagement, ill-health and organizational commitment	South Africa, 595 academics at six universities	Quantitative, cross-sectional, questionnaire	• Job demands and a lack of job resources contributed to burnout • Overload was the most important predictor of burnout, which, in turn, was related to physical and psychological ill-health • Burnout further mediated the relationship between job demands and ill-health	• Cross-sectional design • Reliance on self-reports
Fernet et al. (2004)	To examine the interplay among job demands, job control, and work self-determination to predict burnout	Canada, 398 university professors at one French-Canadian university	Quantitative study, cross-sectional, questionnaire	• All predictors (job demands, job control, and self-determined work motivation) correlated significantly to emotional exhaustion, depersonalization, and personal accomplishment	• Self-report data • Cross-sectional

Frisby et al. (2015)	To examine effects of college student dissent on instructors' professional outcomes	US, 113 instructors at one university	Quantitative, cross-sectional, questionnaire	• Instructional dissent is positively related to instructors' organizational burnout	• Small sample size • Cross-sectional and self-reports
Ghorpade et al. (2011)	To examine the relationship between burnout, work, and personality and how burnout is affected by the interaction of work and personality	US, 263 faculty members at one university	Quantitative, cross-sectional, questionnaire	• Higher levels of role conflict and role ambiguity were associated with higher levels of emotional exhaustion and depersonalization • Lower levels of role conflict and role ambiguity and higher levels of extraversion, conscientiousness, agreeableness, openness to experience, and emotional stability were associated with lower levels of emotional exhaustion and depersonalization	• Cross-sectional
Gomes et al. (2013)	To examine the mediating role of cognitive appraisals of stressors in the association between occupational stress and burnout	Portugal, 333 academics at one university	Quantitative, cross-sectional, questionnaire	• The stress resulting from work overload, pressure to increase scientific productivity, and work-home conflict was positively related to burnout	• Cross-sectional • Single site study
Gonzalez & Bernard (2006)	To determine the relationship of workload typologies and other selected demographic variables to levels of burnout	North America, 826 undergraduate faculty at 11 colleges and universities	Quantitative, cross-sectional, questionnaire	• The higher levels of emotional exhaustion was displayed by faculty in teaching-full load typology • Teacher perception of academic workload intensity and years of service in	• Cross-sectional • Self-report

				• education contributed the most to emotional exhaustion	
Hogan & McKnight (2007)	To examine burnout among online university instructors	US, 76 online instructors at different universities	Quantitative, cross-sectional, questionnaire	• Teaching online is a stressor • Burnout is prevalent among online instructors	• Small sample size
Lackritz (2004)	To examine burnout among university faculty in relation to demographics, work conditions, performance and productivity	US, 256 university faculty members at one university	Quantitative, cross-sectional, questionnaire	• Number of students taught was positively correlated with emotional exhaustion and depersonalization • Workload was positively correlated with emotional exhaustion • Student evaluations and overall productivity were positively correlated with personal accomplishment	• Data obtained at the first third of a semester. If collected at the end of the semester, the results could be different
Navarro et al. (2010)	To determine the mediating role of perceived personal competence in the association between stressful work conditions and the manifestation of burnout and stress symptoms	Spain, 193 university professors at one university	Quantitative, cross-sectional, questionnaire	• Emotional exhaustion was the only dimension that: a) was negatively impacted by stressful working conditions such as work overload, b) impacted the appearance of stress symptoms • Perceived personal competence mediated the impact of working conditions on depersonalization, personal fulfillment, and appearance of stress symptoms	• Self-report data
Otero-López et al. (2008)	To explore the main determinants of burnout	US,	Quantitative, cross-sectional,	• Lack of social support was a risk factor for burnout • Work hours per week were also associated with burnout	• Correlational nature and causal inferences cannot be made

		813 university professors at one university	questionnair e				
Pandey & Tripathi (2001)	To examine the level of perceived occupational stress and burnout	US, 56 college teachers at one university	Quantitative, cross-sectional, questionnair e	•	Role ambiguity and unreasonable group and political pressure were found to be the two best predictors of various components of burnout	• • •	Self-reports Cross-sectional Small sample size
Siegall & McDonald (2004)	To examine the role of person-organization value congruence on the experience of burnout	US, 135 university faculty members at one university	Quantitative study, cross-sectional, questionnair e	•	Person-organization value congruence was negatively associated with burnout	• •	Cross-sectional Measured some variables with scales of one or two items
Taris et al. (2001)	-To examine the antecedents and consequences of job stress	The Netherlands, 131 academics at one university	Quantitative, cross-sectional, questionnair e	•	High job demands (i.e., time constraints, number of students) were associated with higher strain (emotional exhaustion, health complaints) and withdrawal	•	Relatively small, cross-sectional data-set
van Emmerik (2004)	Examined the direct and buffering effects of mentoring on the relationship between adverse working conditions and job satisfaction and burnout	The Netherlands, 1,320 faculty members at different universities	Quantitative, cross-sectional, questionnair e	• •	Work pressure and role conflict were associated with emotional exhaustion Mentoring mediated the association between adverse work conditions and the experience of burnout and job satisfaction	• •	Self-report data Cross-sectional design

| Vera et al. (2010) | To see if different university work profiles are linked to experience of well-being (burnout, engagement, intrinsic satisfaction) | Spain, 170 university faculty members at one university | Quantitative, cross-sectional, questionnaire | • Research cluster offered the lowest value in burnout and the highest value in engagement and intrinsic satisfaction
• Management cluster presents the highest value in burnout and the lowest in engagement and intrinsic satisfaction | • Cross-sectional
• Self-report data |

Table 3

Studies on Sources of Academics' Negative Emotional Experiences (n = 17)

Author, Date	Topic / Focus	Context / Sample	Paradigm / Method / Data source	Findings	Limitations / Future Research
Boice (1991)	To understand the experiences of new faculty	US, Four cohorts of new faculty (n = 185)	Qualitative, longitudinal (interviewed bi-annually for four years)	• Reported feelings of insecurity, and isolation • Reported worry about establishing a competitive research profile	NA
Gates (2000)	To explain what classroom interactions were stressful for faculty members	US, nine tenured faculty members	Qualitative, field notes, interview, observed for 5 months in undergraduate courses, and document collection	• Reported negative emotions of disappointment, discouragement, exasperation, frustration in relation to misplaced students and believed that these negative emotions stressed them • They found teaching to be tentative, indeterminate, and perilous • Negative emotions of anger, disappointment, and anxiety were associated with teaching stress	• Small sample size

Greene et al. (2008)	To describe the experiences, perceptions, and available support systems of untenured faculty	US, 96 tenure-track faculty	Mixed-methods, online survey and open-ended questions	• They reported stressful and unbalanced lifestyle • Reported being overwhelmed by teaching and research load	NA
Hagenauer & Volet (2014)	To study the origin and causes of university teachers' emotions related to teaching and interactions with students	Australia, 15 university teachers	Qualitative, interviews at two time points (before the academic year started and during the first semester)	• Annoyance and insecurity were the most frequently reported negative emotions	• Did not include researchers who might experience different emotions • Relied on self-reports
Harrison & Kelly (1996)	To explore the variables that influenced tenure-track faculty members' career satisfaction and anticipation of remaining in academia	US and Puerto Rico, 163 tenure-track faculty	Quantitative study, cross-sectional, questionnaire	• Reported feelings of loneliness (43%) and anxiety for being tenured • Loneliness significantly and negatively predicted career satisfaction and staying in academia	• Limited to only one discipline
Lahtinen (2008)	To explore aspects of pedagogical interaction that trigger negative emotional experiences	Finland, eight university teachers	Qualitative, phenomenological approach , interview	• Coping with the emotional load placed on them by the students, making pedagogical decisions under uncertain conditions, facing conflicting expectations and beliefs concerning the teaching-learning process triggered frustration	• Small sample size

Löfström & Nevgi (2014)	Used drawings to get an insight into emotions in university teaching	Finland, 86 university teachers	Qualitative, drawings	• The participants expressed positive emotions within seminar or group work context. Negative emotions were linked to lecture settings • Teachers who adopted student-focused approaches to teaching expressed positive emotions towards teaching, while those who adopted content-focused approaches displayed negative or neutral emotions	NA
Martin & Lueckenhausen (2005)	To examine the change in teachers' understanding of the subject matter and how this change influences the teachers' emotions	US, 31 university teachers	Qualitative, interview	• Teaching a subject alters university teachers' understanding of it and this consequently impacts their emotions • Emotions linked to change: gratifying, reassuring, satisfying, uncertainty, unease, stress, and anxiety	NA
Mullen & Forbes (2000)	To do a needs assessment for mentoring among untenured faculty members	US, Canada, and Australia, 60 pre-tenure faculty	Qualitative, personal reflections: open-ended questions	• They described tenure-earning process as ambiguous, uncertain, and anxiety-provoking	NA
Nir & Zilbersteinin-Levy (2006)	Examines how role stress resulting from occupational insecurity impacts tenure-track faculty	Israel, 10 pre-tenure and six tenured faculty members	Qualitative, interview	• Probation period is characterized by feelings of uncertainty and insecurity	• Small sample size

Postaref f & Lindblo m-Ylänne (2011)	To examine the role of university teachers' emotions (related to their teaching and pedagogical training) in six different teacher profiles	Finland, 97 university teachers	Qualitative, interview	• Those whose teaching approach was more content-focused reported experiencing neutral or negative emotions • Confusion was dominant for those teachers who were in the developmental phase of their teaching	• Results come from the teachers' general descriptions and interview questions did not address the specific role of emotions in teaching
Regan et al. (2012)	To examine their emotional experiences	US, six full-time faculty	Qualitative: four focus group interviews in two rounds	• The central emotions expressed by the participants were related to the following five themes: (a) restricted; (b) stressed; (c) devalued; (d) validated; (e) rejuvenated	• Small sample size
Simmon s (2011)	To outline how seven pre-tenured professors developed as university teachers	Canada, seven pre-tenured university teachers	Qualitative, interview	• Lack of preparation for teaching and teaching overload was associated with anxiety • Moving from the role of graduate student to faculty member is characterized by anxiety	• Small sample size • Included those interested in talking about their teaching
Smith et al. (2008)	To explore if the emotional reactions of university faculty members to group inequities in faculty pay and benefits shape their willingness to protest and their organizational loyalty	US, 370 university faculty members	Mixed methods, survey and open-ended comments	• Sadness, fear, and anger are distinct emotional responses to a collective disadvantage • Group-based anger mediated the relationship between collective disadvantage and willingness to protest whereas group-based sadness mediated the relationship between collective disadvantage and organizational loyalty	• Many variables measured with single questions • Did not measure self-conscious emotions such as guilt and shame

Solem & Foote (2004)	To explore the experiences of early-career faculty	US, 40 tenure-track faculty	Qualitative, focus group interviews	• Teaching is the primary source of anxiety among new professors	• Single-site study
Stupnisy et al. (2014)	To examine the presence and frequency of emotions among new faculty members and to explore how emotions related to their success in teaching and research	US, 18 tenure-track faculty members (first-third year)	Mixed-methods, survey and focus group interviews	• Identified emotions as an important factor that significantly predict faculty success • Enjoyment, pride, and boredom were the most frequently reported teaching-related emotions, while anxiety, guilt, and helplessness were the most frequently researcher-related emotions	• Emotions emerged spontaneously when they were looking at success • Small sample size for quantitative analysis • Single-site
Whitt (1991)	To examine and describe the experiences of new faculty	US, six new faculty	Qualitative, interview	• Expressed predominantly negative emotions about being a new faculty member and described it as threatening and frustrating • Some expressed confusion since they had no idea of what was going on	• Small sample size • Single-site study

3.1. Consequences of Academic Stress for Psychological Distress, Anxiety, and Depression

As a negative indicator of psychological well-being, psychological distress includes "depression, anxiety, somatic symptoms, obsessive-compulsive disorder, and post-traumatic stress" (Schmitt *et al*., 2014, p. 926). Empirical findings have shown that higher stress levels lead to psychological distress, anxiety, and depression (e.g., Dormann & Zapf, 1999; Ford *et al*., 2011). Consistent with existing findings in non-academic populations, results from studies on overall psychological health and psychological distress have revealed that academics who report higher levels of stress also report poorer psychological well-being and higher psychological distress. For instance, a national study of Canadian academics found 13% of the 1,440 faculty assessed, reported high levels of psychological distress due to stressful work conditions (Catano *et al*., 2010; for similar findings from aggregate studies of faculty and general academic staff, see A. H. Winefield & Jarrett, 2001).

In several large-scale and national studies, work–life conflict has emerged as the most frequently reported stressor to be significantly associated with poorer psychological health levels amongst academics (Barkhuizen & Rothmann, 2008; Catano *et al*., 2010; V. Hogan, Hogan, Hodgins, Kinman, & Bunting, 2014; Kinman, 2008; Kinman & Jones, 2008b). National studies of academics in Canada (Catano *et al*., 2010) and the U.K. (Kinman & Jones, 2003) have also identified work–life conflict as the main predictor of psychological distress. Various additional workplace stressors, ranging from personal to social factors, and from resource-related to management-related issues, have similarly been identified as linked to poorer levels of psychological well-being and higher psychological distress (see Barkhuizen & Rothmann, 2008; Kinman, 2008; Kinman & Jones, 2003; Kinman & Jones, 2008a; Leinbaugh, Hazler, Bradley, & Hill, 2003; McCoy, Newell, & Gardner, 2013; Slišković, Maslić Seršić, & Burić, 2011; Sun *et al*., 2011).

Other studies have further specified anxiety and depression as negative indicators of psychological well-being. For instance, a survey of 827 Chinese university teachers documented the prevalence of depressive symptoms due to stress, with 58.9% participants reporting depressive symptoms (Shen *et al*., 2014). Similarly, a study of 337 Japanese university teachers showed a strong positive association between stressors and high incidence of anxiety and depression (Kataoka, Ozawa, Tomotake, Tanioka, & King, 2014). Moreover, a national survey of U.K. faculty (Kinman & Jones, 2003) revealed a caseness rate of above 50% for psychological distress, with 21.8% of the faculty interviewed reporting serious levels of depression and anxiety (for similar findings from aggregate studies of faculty and general academic staff, see Gillespie *et al*., 2001; J. M. Hogan, Carlson, & Dua, 2002; Mark & Smith, 2012).

3.2. Consequences of Stress for Faculty Burnout

The most common adverse consequence of stress among academics concerns its contribution to the development of burnout: "a prolonged response to chronic emotional and interpersonal stressors on the job" (Maslach, 2003, p.189). Indeed, of the 46 studies reviewed, 16 demonstrated that stress was associated with burnout. Although often considered an emotion itself, burnout consists of three discrete components. The first component emotional exhaustion, represents the core dimension of burnout and refers to fatigue and feeling depleted of emotional energy due to the excessive emotional demands of providing service to others. Second, depersonalization or cynicism reflects the development of negative attitudes and feelings towards others, and treating them as dehumanized objects. Third, reduced personal accomplishment involves dissatisfaction and perceptions of decline with respect to one's occupational achievements (Maslach, 2003; Maslach & Jackson, 1981, 1984; Maslach, Jackson, & Leiter, 1986). With respect to academics, the degree of burnout they experience has been found to be comparable with that of school teachers and medical professionals for whom burnout levels are widely considered to be particularly high (Watts & Robertson, 2011).

The literature suggests that the three dimensions of burnout are associated with one's work conditions, with emotional exhaustion showing the strongest correlations with job-related factors (Maslach, 2003; Maslach & Jackson, 1984; Maslach, Leiter, & Jackson, 2012; Maslach, Schaufeli, & Leiter, 2001). The

prevalence of burnout among faculty has similarly been linked to various work demands such as overload, with this factor emerging as the most important predictor of burnout in a study of 595 academics in South Africa (Barkhuizen, Rothmann, & Van de Vijver, 2014). Other studies of academics have also discovered significant relations between work overload and the three dimensions of burnout (Anderson, 2006; Fernet, Guay, & Senécal, 2004; Gomes, Faria, & Gonçalves, 2013; Gonzalez & Bernard, 2006; Lackritz, 2004; Navarro, Mas, & Jiménez, 2010). Relatedly, time constraints resulting from work overload have been shown to positively correspond with burnout in studies with Australian (Anderson, 2006) and Dutch academics (Taris, Schreurs, & Van Iersel-Van Silfhout, 2001).

Burnout is common in occupations that require substantial interaction with others (Maslach & Jackson, 1984; Maslach *et al*., 1986). The academic profession fits in this category as it often requires consistent interaction with large numbers of students as well as staff and administration (Blix *et al*., 1994). Consistent with Watts and Robertson (2011) who identified interactions with students as the most significant predictor for burnout in faculty, the present review suggests a clear link between student variables and academics' experiences of burnout. For instance, the study by Taris *et al*. (2001) with 131 Dutch faculty reported a positive association between the number of students taught and the emotional exhaustion dimension of burnout. Similarly, a later study of 256 U.S. faculty (Lackritz, 2004) found a positive association between the number of students taught by faculty and emotional exhaustion as well as depersonalization suggesting that larger class sizes result in a greater workload (Watts & Robertson, 2011), a crucial contributor to burnout (Barkhuizen *et al*., 2014). As another example, Frisby, Goodboy, and Buckner (2015) found instructional dissent, defined as the process by which "students express their disagreements or complaints about class-related issues" (Goodboy, 2011, p. 423), to correspond with greater burnout among post-secondary instructors (for similar findings with K-12 teachers, see Chang, 2009).

In regard to interactions with co-workers, unsatisfactory relations between academics and their superiors were found to be positively linked to emotional exhaustion and depersonalization (Barkhuizen *et al*., 2014). Likewise, perceived lack of social support in the workplace was also found to be positively associated with these components of burnout in studies of 813 U.S. college professors (Otero-López, Mariño, & Bolaño, 2008) and 1,320 Dutch faulty (van Emmerik, 2004).

The types of academic work demands placed on faculty represent yet another aspect of the profession found to be associated with burnout. For instance, a North-American study of 826 faculty showed a full teaching load to predict the highest level of emotional exhaustion (Gonzalez & Bernard, 2006). Also, online teaching, a new form of pedagogy that presents a variety of challenges for instructors, was found to be associated with burnout in a study of 76 U.S. college instructors (R. L. Hogan & McKnight, 2007). Conversely, academics whose work consisted primarily of research responsibilities were shown to experience the lowest level of burnout, with those performing more managerial tasks suffering the highest burnout levels (Vera, Salanova, & Martín, 2010). Given that teaching and management responsibilities inherently involve more interpersonal interactions than research, their stronger relations with burnout are perhaps not surprising.

Additional contributors to burnout among academics include role conflict and ambiguity (see Pandey & Tripathi, 2001). Recently research by Barkhuizen *et al*. (2014) found low role clarity to correspond with greater emotional exhaustion and depersonalization in faculty. This finding is consistent with related findings showing faculty burnout to be positively associated with higher levels of role conflict and ambiguity (Fernet *et al*., 2004; Ghorpade, Lackritz, & Singh, 2011; van Emmerik, 2004). Not surprisingly, work–life conflict has also been found to be related to burnout among academics, with the overflow and integration of academic work into one's personal life corresponding with greater emotional exhaustion in a study by Gomes *et al*. (2013) with 333 Portuguese faculty. Finally, conflicting person-organization values were found to be associated with the experience of burnout in a study of 135 U.S. faculty conducted by Siegall and McDonald (2004). The following section turns the discussion to the topic of negative emotional experiences that could further compromise academics' psychological health.

3.3. Work Experiences and Emotions

3.3.1. Differentiating Emotion from Stress

The term emotion refers to an individual's response to a situation considered relevant to their current goals, with emotional experiences often being immediately predicted by cognitive appraisals of goal progress (Gross, 2010). Since emotion and stress overlap, it is necessary to consider both their interdependence and distinguish how they are different. Psychological stress is defined as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p. 19). As such, both stress and emotion are contingent upon cognitive appraisals; the way an individual perceives their goal progress impacts psychological well-being. However, as emotion is commonly operationalized as a broader concept that includes negative experiences such as stress, stress is typically more limited in its scope (Lazarus, 1993. Whereas negative emotions arise when individuals appraise their progress as thwarted or goal-incongruent (Lazarus, 1993), perceived stress reflects a belief that these challenges exceed one's capabilities to respond to them. Important to note is that individuals' emotional experiences have implications for their psychological well-being, such that positive emotions contribute to better psychological health whereas excessive negative emotional experiences are linked to impaired psychological well-being and stress (Houben *et al*., 2015).

3.3.2. Academics' Negative Emotional Experiences

Emotions are not only a prevalent but also an integral part of employees' work experiences (Ashforth & Humphrey, 1995; Woods, 2010) that can impact performance as well as well-being (Chang, 2009; Frenzel, Goetz, Stephens, & Jacob, 2009; Hughes, 2001). Similar to other demanding employment settings, the academic profession has substantial emotional elements encompassing a range of both positive and negative emotional experiences (Hagenauer & Volet, 2014; Martin & Lueckenhausen, 2005; Neumann, 2006; Postareff & Lindblom-Ylänne, 2011). The subsequent sections review research aimed at identifying the sources of academics' negative emotions as per the following three types of precursors: student-related, teaching- and research-related, and institutional factors.

Student-related Factors. Firstly, although interactions with students represent an integral aspect of the academic profession, they are often reported to be distressing and frustrating to faculty (Frisby *et al*., 2015; Lahtinen, 2008). Academics consequently report feelings of anger, irritation, disappointment, discouragement, exacerbation, frustration, annoyance, and insecurity in relation to students who are disengaged or disruptive, as well as interpersonal conflict (i.e., when students' and teachers attitudes do not match; Gates, 2000; Hagenauer & Volet, 2014). Given that negative interactions with students (i.e., student dissent) are a likely predictor of burnout among university teachers (Frisby *et al*., 2015), these relations could explain why conflictual student–instructor interactions correspond to negative psychological outcomes in faculty.

Teaching- and Research-related Factors. A second precursor to negative emotional experiences are teaching responsibilities. For example, the unpredictable and uncertain aspects of post-secondary instruction, such as interactions with students or gauging comprehension in the absence of sufficient student feedback, have been reported to be distressing and frustrating in a sample of Finnish university teachers (Lahtinen, 2008) and linked to anger, anxiety, and disappointment among U.S. faculty (Gates, 2000). In a more recent study, university teachers reported feelings of insecurity in relation to teaching and marking assignments (Hagenauer & Volet, 2014). More precisely, unfamiliarity with teaching content, limited teaching experience, and the perception of having only partial control over students' learning contributed to their distress. Additionally, the subjectivity involved in grading essay assignments emerged as a further trigger of feelings of insecurity.

Similarly, in a study of how varied teaching profiles were associated with different emotions, Postareff and Lindblom-Ylänne (2011) found feelings of confusion to be most dominant for faculty during the

developmental phase of their teaching. Additionally, online instruction emerged as another dimension that evoked more negative than positive emotions in faculty (R. L. Hogan & McKnight, 2007) who have additionally been found to report feeling anxious, apprehensive, and helpless as well as inadequate, insecure, restricted, and overwhelmed with respect to online teaching (Regan *et al*., 2012; e.g., findings of burnout in online instruction from R. L. Hogan & McKnight, 2007). Research has also shown connections between teaching methods and emotions, with university teachers who adopt learner-focused approaches tending to report positive emotions towards teaching, with those endorsing content-focused approaches being more likely to report neutral or negative emotions (Postareff & Lindblom-Ylänne, 2011).

Consistent with theorizing by Pekrun (2006) and corresponding empirical evidence regarding the domain specificity of emotions in academic settings (Goetz, Frenzel, Pekrun, Hall, & Lüdtke, 2007), the contextual nature of emotions linked to university teaching was highlighted in a qualitative study of a sample of Finnish university teachers (Löfström & Nevgi, 2014). In seminar and group work contexts in which the instructor and students were in close contact (i.e. students being more likely to share their thoughts with teachers), positive emotions tended to be experienced. Conversely, more impersonal lecture settings were linked to negative emotions in instructors such as isolation and anxiety. Finally, teaching has been found to evoke mixed emotions when faculty are teaching a subject that requires them to alter their understanding of what it means to know, teach, and learn that subject. Whereas greater uncertainty, unease, stress, anxiety, and confusion have been reported following radical conceptual change concerning instruction in faculty, feelings of gratification, reassurance, and satisfaction have also been reported (Martin & Lueckenhausen, 2005).

Negative emotions about teaching have also been observed specifically among pre-tenure academics, as in a recent study of U.S. faculty who were found to report greater boredom concerning teaching compared to boredom regarding research (Stupnisky *et al*., 2016). Other studies have also found pre-tenure faculty to report feeling overwhelmed by their teaching load, specifically when teaching responsibilities constitute the majority of their academic workload (Greene *et al*., 2008), with studies also showing feelings of frustration and anxiety to arise from lack of teaching preparation (Simmons, 2011; Solem & Foote, 2004; for related findings with school teachers, see Chang, 2009; Frenzel *et al*., 2009). With respect to research responsibilities, a mixed-methods study by Stupnisky *et al*. (2016) of tenure-track faculty further identified anxiety, guilt (i.e., when research was avoided), and helplessness as the most common negative emotions specific to research obligations. Qualitative studies have similarly shown tenure-track faculty to report feeling overwhelmed by their research demands (Greene *et al*., 2008) as well as worried about establishing a competitive research profile (Boice, 1991).

Institutional Factors. An institutional element that has specifically been found to trigger negative emotional experiences is the pursuit of tenure. For instance, tenure- track faculty have been found to express predominantly negative emotions about being a new faculty member, generally perceiving the tenure process as frustrating, ambiguous, uncertain, and anxiety-provoking (Mullen & Forbes, 2000; Whitt, 1991). Harrison and Kelly (1996) also identified feelings of anxiety and loneliness (43%) among academics seeking tenure, with loneliness being significantly and negatively associated with career satisfaction and intentions of staying in academia. Other studies related to tenure-track academics have similarly found academics to report feelings of insecurity and fear about obtaining tenure, or the tenure-related impact of poor course evaluations, as well as uncertainty and confusion about the tenure process (Boice, 1991; Nir & Zilberstein-Levy, 2006; Whitt, 1991). Concerning other organizational factors, research has also shown faculty to experience negative emotions arising from inequities in pay and employment benefits, with these perceptions further found to be associated with emotions of anger, fear, and sadness in a study of U.S. faculty (Smith *et al*., 2008).

As outlined above, despite the unique affordances of the academic profession, various aspects of academic work can trigger negative emotional experiences that, if excessively experienced, may jeopardize faculty well-being. More precisely, given that related research shows the experience of negative emotions to be associated with impaired psychological well-being and burnout in instructional

settings (Chang, 2009; Hughes, 2001), it could be inferred that the negative emotions experienced by academics could likewise contribute to greater burnout. Hence, managing negative emotions represents a crucial component of successful faculty development (Gates, 2000; Regan *et al*., 2012; Zhang & Zhu, 2008), with efforts to better equip faculty with effective emotion regulation strategies proving increasingly necessary to avoid harm to psychological health.

3.3.3. Additional Considerations

To this point, the studies reviewed demonstrate that stress and specific work experiences can undermine psychological well-being in academics. It should be noted, however, that beyond relations with perceived stress, findings suggest that academics' poor psychological health is further linked to ill health (Dreyer, Dreyer, & Rankin, 2010; Sang, Teo, Cooper, & Bohle, 2013), suicidal thoughts (Kelly, Charlton, & Jenkins, 1994), lower job satisfaction, and intentions to leave — the economic cost of which is well-established (Lundberg & Cooper, 2010). These findings are also consistent with research on other occupational groups linking depression and anxiety to burnout (Papastylianou, Kaila, & Polychronopoulos, 2009), diminished job satisfaction (Ferguson, Frost, & Hall, 2012), and turnover intentions (Lu, Zhong, & Chen, 2013).

Meanwhile, burnout has been shown to be further associated with impaired performance and productivity (Blix *et al*., 1994), job dissatisfaction, and turnover intentions in faculty (Li, Li, & Sun, 2013). By the same token, existing research suggests that stress contributes to well-being outcomes indirectly through greater burnout, as observed in a study of 300 Chinese university teachers showing burnout to mediate the effects of stress on depression (Zhong *et al*., 2009). Similarly, the study of South African academics by Barkhuizen *et al*. (2014) found burnout to mediate the effects of perceived job demands on physical and psychological health, particularly with respect to the pace, amount, and compounding of work demands (e.g., simultaneous obligations).

4. General Discussion

Existing research on subjective well-being in faculty has to date tended to focus on limited aspects of psychological well-being, with little research providing a holistic perspective on this important topic. The present review is the first to provide an up-to-date synthesis of research on the consequences of stress and work experiences for psychological health among academics. As such, the findings from this review add to the body of evidence on psychological well-being among faculty. Following from the J D-R model (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011), the review focused on health impairment implications in showing stress among academic populations to have various negative consequences for academics' psychological health including psychological distress, anxiety, depression, burnout, and negative emotions. As outlined above, the findings observed across existing studies underscore the significant relationship between adverse work experiences and impaired mental health among academics. In the sections that follow, limitations of the review (e.g., methodological challenges) and critical areas of research needed to advance psychological well-being research in academic populations are discussed.

4.1. Limitations of Studies Reviewed

The methodologies of the studies included in this review were limited in multiple ways, most of which are acknowledged by the authors of the respective studies. Firstly, of the 29 studies that focused on the association between stress, overall psychological well-being, psychological distress, depression, and burnout, the majority (*n* = 27) were cross-sectional and correlational in nature and thus limited as to their potential for causal assertions (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A second important limitation pertains to the exclusive reliance in the studies reviewed on self-report measures of psychological well-being, psychological distress, depression, burnout, and emotions which is problematic

in that self-reports may be influenced by personal biases (e.g., positive/negative affectivity, social desirability; Spector, 2006) as well as common method variance (Podsakoff *et al*., 2003).

Specifically, of the nine studies that had the study of emotions as their focus, all except one utilized interviews to gain insight into academics' experiences of emotions. Although interviews are an effective technique to elicit information, they measure primarily the subjective component of emotions and are thus not sufficient to capture their multi-componential nature (Pekrun & Bühner, 2014). A further limitation is that among the 16 studies that explored burnout and reported negative emotional experiences, 11 studies drew on data from single institutions raising questions as to the external validity of the findings observed. Finally, the reviewed studies captured mostly academics' teaching-related emotions. Given the domain specificity of emotions (Goetz *et al*., 2007; Pekrun, 2006), each of academics' other tasks (i.e., conducting research, supervising, and providing service) may entail different emotions.

4.2. Implications and Directions for Future Research

The present paper set out to review the fragmented literature pertaining to psychological well-being among academics in a manner consistent with the job demands component of the J D-R model. In summary, findings from both qualitative and quantitative research approaches reveal that academics encounter considerable stress inherent to their profession that, in conjunction with specific elements of the academic work experience, jeopardizes their psychological health by making them vulnerable to psychological distress, depression, burnout, and negative emotions, as well as the corresponding negative consequences. Given the critical nature of psychological well-being in predicting job performance (Ford *et al*., 2011), and the pivotal role of academics in knowledge creation and instruction (Gmelch *et al*., 1984; Trigwell, Prosser, & Waterhouse, 1999), impaired psychological health among faculty has significant negative impacts on academic research and training (Gillespie *et al*., 2001; Lease, 1999).

The findings signify the importance of increasing efforts to protect psychological well-being in academics on the part of both faculty and administrations, and for research in this domain to pay greater attention to faculty adjustment, in addition to performance and accountability outcomes. Similarly, given the unfortunate lack of research on academics' emotions, and significance of emotions for psychological health, scholarly attention to the emotional aspects of this profession is also required. Considering the commonly observed adverse consequences of stress and negative emotions among faculty (Trigwell, 2012; Watts & Robertson, 2011), these findings further speak to the need for academics to understand how stress and emotions could impact their psychological health as well as performance and student learning outcomes.

Additionally, the findings from this review have practical implications. As job demands compromise psychological well-being among academics, it may be advisable that university administrators implement changes to policy and organizational conditions to address the issue of excessive job demands as well as enhance job resources to address the psychological and physical costs of impaired psychological health in faculty. As indicated by repeated calls by researchers in this domain (Gates, 2000; Kataoka *et al*., 2014; Regan *et al*., 2012; Zhang & Zhu, 2008), these findings similarly warrant further administrative consideration as to whether or not academics are indeed being equipped with effective strategies to combat stress. In this respect, related initiatives to develop and implement cost-effective interventions to promote academics' coping resources are needed to attenuate the adverse impact of faculty stress and negative emotions; proactive efforts to prevent damages to psychological health, as opposed to reactionary programs. As yet, there is little precedence to explore the potential of interventions in preventing and reducing stress among academics. Nonetheless, a recent Australian study of faculty and university staff linking stress-reduction interventions to higher job satisfaction, organizational commitment, perceived justice, and trust in administration does show such programs to have considerable promise (Pignata & Winefield, 2015).

In light of the findings of the review and the aforementioned methodological limitations, future research should be further expanded to capture faculty emotions in domains other than teaching to provide

a more complete picture of their psychological well-being regarding other academic responsibilities (e.g., research, service). Additionally, longitudinal research is sorely needed to more clearly delineate causal relations between variables related to psychological health in faculty, with greater efforts to incorporate multiple sources of information from students and peers, as well as from faculty across institutions in multi-site initiatives. With regard to emotions, given the multi-componential nature of emotions, there is also a need to utilize objective measures such as physiological indicators or observations of facial expressions to better evaluate the varied nature of academics' emotions (Reisenzein, Junge, Studtmann, & Huber, 2014). It is anticipated that more specific and varied measurement techniques should contribute to the reliability and objectivity of findings otherwise based on self-report methods.

In conclusion, the focus of the present review was to bring to the fore the issue of psychological well-being among academics and identify the manner in which work-related stress can compromise psychological health in this underexplored post-secondary population. As evidenced by findings presented above, the varied academic demands and stressors faced by faculty on an everyday basis have clear empirical associations with psychological health problems, warranting specific consideration of these results on the part of academic institutions and associations when developing related intervention and support initiatives. These findings also underscore the importance of a preventative focus on psychological well-being in faculty with respect to addressing the psychological implications of existing academic conditions, in addition to reactive intervention efforts once psychological problems become evident, so as enable a sustainable long-term employment context for post-secondary faculty.

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