

Stress, Burnout, Anxiety and Depression: How they impact on the mental health and wellbeing of teachers and on learner outcomes

Literature Review
October 2021

Sarah Gibson, Director at CooperGibson Research

Dr Catherine Carroll, Research Associate, CooperGibson Research



Contents

Executive summary	03
Key findings	04
Approach	04
Recommendations for further research	05
Introduction	06
2.1 Aims.....	07
2.2 Approach.....	07
2.2.1 Scoping review.....	07
2.2.2 Main review of evidence.....	08
2.3 Structure of this report.....	08
Key concept definitions and conceptual framework for teacher occupational wellbeing	09
3.1 What is stress?	10
3.2 What is burnout?	10
3.3 What is depression?.....	10
3.4 What is anxiety?.....	11
3.5 The stress, burnout, depression and anxiety link.....	11
3.6 A conceptual framework for teachers' occupational wellbeing	12
Stress, burnout, anxiety and depression: evidence of the impact for teachers' mental health and wellbeing at the individual level (Research questions 1 and 2)	13
4.1 The impact of stress and/or burnout on teachers' mental health (mental occupational wellbeing)	14
4.2 The impact of stress and/or burnout on physical health (physical occupational wellbeing).....	16
4.3 The impact of stress and/or burnout on job satisfaction (subjective occupational wellbeing)	17
4.4 The impact of stress and/or burnout on intention to leave their job and/or the teaching profession	19
4.5 Anxiety and/or depression: evidence of the impact for teachers' mental health and wellbeing at the individual level.....	20
Stress, burnout, anxiety and/or depression: evidence of the impact for teachers' ability to carry out their role at school (Research question 3)	21
5.1 Impaired performance and reduced sense of self-efficacy at work (cognitive wellbeing).....	22
5.2 Classroom management self-efficacy	24
Evidence of the impact of teachers' experience of stress, burnout, anxiety and/or depression on learner outcomes (Research question 4)	25
6.1 Academic achievement	26
6.2 Learner motivation and attitudes towards learning	27
6.3 Wellbeing of learners	27
Concluding discussion and implications	28
7.1 Review strengths and limitations	29
7.2 Key findings.....	29
7.3 Recommendations for further research.....	30
References	31
Appendix: Search parameters	35

Executive summary

Good mental health and wellbeing of teachers is important for them as individuals, for the profession and for the students they teach.¹ It is therefore concerning when the United Kingdom's Health and Safety Executive (2018),² reported that teachers, compared with other professions, have some of the highest rates of work-related stress, depression and anxiety in Britain.³ Moreover, the impact of stress for teachers as individuals and for the profession more widely is less understood. To better inform this understanding, Education Support, commissioned CooperGibson Research to explore the evidence base for the impact that stress, burnout, depression and anxiety has on the mental health and wellbeing of the teaching profession.

The main aim of this review was to explore the evidence base on the impact of stress, depression and anxiety on the mental health and wellbeing of the teaching profession. Specifically, it considered:

Stress and burnout⁴: evidence of the impact for teachers' mental health and wellbeing at the individual level (*Research question 1*)

Anxiety and/or depression: evidence of the impact for teachers' mental health and wellbeing at the individual level (*Research question 2*)

Stress, burnout⁴, anxiety and/or depression: evidence of the impact for teachers' ability to carry out their role at school (*Research question 3*)

Stress, burnout⁴, anxiety and/or depression: evidence of the impact for teachers' experience of stress, anxiety and/or depression on learner outcomes (*Research question 4*).

It is recognised that anxiety and depression are diagnosable disorders, and it is also recognised that a relationship exists between stress, burnout, anxiety and depression. The review takes this into account, while presenting an overview of the different ways in which research studies have investigated the impact of stress, burnout, anxiety and depression. The review also presents the implications of the findings for our understanding of the field and future research.

¹ DfE, (2021). The Education Staff Wellbeing Charter. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984134/Education_staff_wellbeing_charter_2021.pdf

² Health and Safety Executive, (2018). Health and safety statistics. Key figures for Great Britain (2019/20). www.hse.gov.uk/statistics/.

³ At a rate of 2,100 cases per 100,000 professionals compared with 1,320 cases for all occupational groups

⁴ Burnout was not originally part of the original research questions, but added when found important to include after the scoping study.

Key findings

There are five key findings from this evidence review, although it is not possible to draw definitive conclusions from the current empirical evidence base on the impact of stress, burnout, depression and anxiety on teacher's mental health and wellbeing.

1 Evidence for the impact of stress, burnout, anxiety and depression

- The evidence suggests that if a teacher experiences stress and/or burnout they are more likely to have: (1) mental and physical ill health; (2) less job satisfaction; and (3) intentions to leave their job and/or the teaching profession.
- There is some limited evidence to suggest that if a teacher experiences anxiety they are at increased risk of absenteeism and having intentions of leaving their job and/or the teaching profession.
- There is evidence to suggest that teachers with depression are at increased risk of feeling dissatisfied with work, presenteeism and absenteeism.
- Some teachers with reduced mental health and wellbeing are at greater risk of experiencing reduced self-efficacy to carry out their role generally and specifically in relation to classroom management.

2 Evidence for the impact on learner outcomes

There is some evidence to show an association between teacher stress, burnout, depression and/or anxiety with poorer learner academic achievement, learner engagement (including concentration, satisfaction rates, motivation and behaviour) but less evidence for learner wellbeing.

Approach

The review has focused on studies involving teachers working in the compulsory education sector (learners aged four to 18 in schools).

Only research that was undertaken in the UK, Europe, North America and Australia between 2011 and 2021 was included. Research relating to teacher wellbeing during the Covid-19 pandemic was excluded.

Using specific search criteria, 42 studies were identified for inclusion in this review (38 empirical studies and 4 reports), the majority (33/42) had adopted a cross-sectional research design.

3 Lack of research about the impact of stress, burnout, anxiety and depression

The field is under-researched in the UK and internationally. This was particularly evident in respect to: (1) teachers' physical health; and (2) the impact of depression and anxiety for teachers as individuals, for how they carry out their role and for learners in school.

4 Limited variety of research designs investigating the field

The majority of studies used a cross-sectional design which is important for finding an association between, for example, stress and teachers' physical health. The use of cross-sectional studies does not allow for investigating the direction of causation and the trajectory of symptoms, such as, to what extent does stress and/or burnout cause depression rather than does depression act as a cause of stress and/or burnout? Moreover, there were very few studies that qualitatively investigated the lived experience of the impact of stress and burnout, the implications of teacher mental health and wellbeing and whether, for example, it changed over an academic school year.

5 Multitude of ways in which mental health is measured

Finally, during the review the authors recorded a total of over sixty different measures (for stress, burnout, depression and anxiety) used in the cross-sectional studies. These measures included different standardised mainly self-report questionnaires for the same constructs (e.g. burnout). They also included a reduced number of question items taken from a standardised assessment and questionnaires devised by the authors specifically for the study. This makes it very challenging to directly compare and have greater confidence in the findings and common trends from different studies.



Recommendations for further research

Based on the overall findings of the review, the following actions and areas for investigation are recommended:

- Although the lack and type of evidence did not allow for definitive conclusions, the trends indicate worrying implications of poor teacher mental health and wellbeing. These are sufficient to warrant the need for national policy and evidence-informed targeted strategies in schools that emphasise the need to prevent teacher stress and/or burnout and support for teachers if they do experience poor mental health and wellbeing.
- Funders should look to commission further research on the impact of stress, burnout, depression and anxiety based on a range of research designs, such as longitudinal and multi-level mixed methods designs to frame investigations. This would allow for greater confidence in the knowledge and understanding garnered and therefore, in the actions of school leaders, policy makers and researchers to improve prevention and intervention strategies for teacher mental ill health and wellbeing.
- Researchers, practitioners and relevant organisations to investigate the feasibility of reaching some consensus around the constructs and measures of teacher occupational wellbeing to allow for findings of research studies to be compared more meaningfully and to support a more coherent and shared understanding of the field.



Introduction

The good mental health and wellbeing of teachers is important for them as individuals, for the profession and for the students they teach.⁵ It is therefore concerning when the UK Health and Safety Executive (2018)⁶ reported that teachers, compared with other professions, have some of the highest rates of work-related stress, depression and anxiety in Britain.⁷ Moreover, this is not an isolated finding nationally or internationally.

⁵ DfE, (2021). The Education Staff Wellbeing Charter. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984134/Education_staff_wellbeing_charter_2021.pdf

⁶ Health and Safety Executive, (2018). Health and safety statistics. Key figures for Great Britain (2019/20). www.hse.gov.uk/statistics/.

⁷ At a rate of 2,100 cases per 100,000 professionals compared with 1,320 cases for all occupational groups.

Difficult working conditions and high levels of stress can alter good physical and mental health. The OECD's Teaching and Learning International Survey (TALIS) 2018⁸ reported that, on average across the OECD countries, 18% of teachers reported experiencing stress a lot in their work. The average for England was much higher at 31% for primary school teachers and 38% for lower secondary school teachers. As part of the Education Support annual Teacher Wellbeing Index in 2019,⁹ 62% of educational professionals described themselves as stressed in their current roles (13% very stressed), compared with 37% who said they were not stressed. The impact of this stress for teachers as individuals and for the profession more widely is less understood.

To better inform this understanding, Education Support, commissioned CooperGibson Research to conduct a literature review examining recent evidence for the impact that stress, burnout, anxiety and depression have on the mental health and wellbeing for teachers at an individual level, for their role in school and for the learners in their classrooms. In addition, this review presents an overview of the different ways in which research studies have investigated the impact of impaired teacher mental health and wellbeing, and the implications for our understanding of the field and for future research.

2.1 Aims

The main aim of this review was to explore the evidence base on the impact of stress, depression and anxiety on the mental health and wellbeing of the teaching profession. Specifically, it considered:

Stress: evidence of the impact for teachers' mental health and wellbeing at the individual level.

Anxiety and/or depression: evidence of the impact for teachers' mental health and wellbeing at the individual level.

Stress, anxiety and/or depression: evidence of the impact for teachers' ability to carry out their role at school.

Stress, anxiety and/or depression: evidence of the impact for teachers' experience of stress, anxiety and/or depression on learner outcomes.

NB: Burnout was not part of the original aims, but was added after the scoping study, noted opposite.

2.2 Approach

The review comprised two main stages: 1) a brief scoping review, and 2) main searches, plus synthesis of material and compilation of the review.

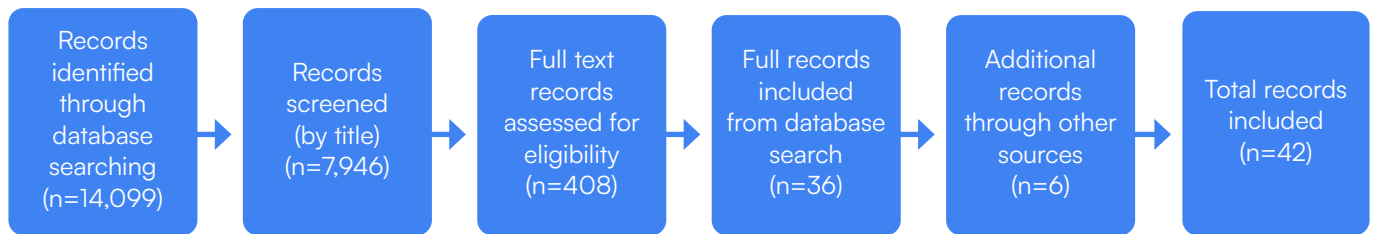
2.2.1 Scoping review

The initial scoping review was used primarily to confirm the main research parameters including relevant constructs, keywords and databases to be drawn upon for the main literature searches. The parameters for the original research focused on research between 2011 and 2021, the United Kingdom (UK) compulsory education sector (aged four to 18 in schools) and education staff including support staff (but not staff such as education psychologists and counsellors who have their own professional organisations and occupational standards). The initial scoping exercise showed that most of the research related to the aims of the review had been undertaken outside of the United Kingdom. Therefore, it was decided to broaden the geographical parameters for the full search to include Europe, North America and Australia where most of the research had been conducted. At this stage no specific studies relating to, for example, support staff were found, and as the country parameter had been broadened it was agreed to focus on teachers only. Due to the number of research questions, breadth of the review and resource constraints, studies that focused solely on specific groups of teachers (e.g. early-career teachers, subject specialists and teachers in special educational needs contexts) were not included in the inclusion criteria, as drawing meaningful comparisons and identifying trends across the different samples would need to be part of a larger study.

The scoping review took place in April and May 2021 as research was emerging nationally and internationally in relation to the Covid-19 pandemic and teacher wellbeing. However, the authors have not included this literature in the analysis as extrapolating the pandemic from the 'business as usual' impact of poor mental health and wellbeing would have been challenging. Finally, burnout was identified as having frequently occurred in the results of the preliminary search and it was decided to include this as a main search term. A detailed breakdown of the criteria for the full search review are in the Appendix.

⁸ OECD (2019), TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued professionals, TALIS, OECD Publishing, Paris.
https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72be0b468ed3dac915593716de&itemGO=oecd&itemContentType=book

⁹ Education Support Partnership, (2019). Teacher Wellbeing Index 2019. Education Support Partnership.
https://www.educationsupport.org.uk/media/b1qbtmzl/teacher_wellbeing_index_2019.pdf

Figure 1: Literature searching and screening process

2.2.2 Main review of evidence

First, an extensive computerised literature search (138 separate searches) was conducted using 16 databases (see Appendix), including the Proquest Central¹⁰ database. In addition, relevant websites and grey literature were included in the search strategy. The key search terms included “teacher” and “education” and “burnout” and “stress” and “depression” and “anxiety” and “wellbeing” and “health” OR “student” OR “absenteeism” OR “presenteeism” OR “effectiveness” OR satisfaction OR “turnover” (see list in Appendix). The search was conducted in April to June 2021. Overall, the search returned 14,099 studies. This high number was due to the review having four broad research questions resulting in the need for an increased number of key words and different combinations of the key words, duplicates and a high number of student dissertations which were not part of the inclusion criteria. After removing duplicates and screening titles, and then titles and abstracts for relevance, 36 studies remained. An additional six studies were added during the review (as reference lists for studies were read) leaving 42 studies in total (Figure 1). These included peer reviewed empirical studies (n=38) and reports (n=4).

In the 42 studies included in this present review, the majority (n=33/42) adopted a cross-sectional research design. In this design, investigators collect data, at one time point, for exposures (e.g. stress, and burnout) and outcomes (e.g. depression, physical symptoms and absence from work) to compare any differences between the participants.¹¹ However, because the exposures and outcomes are measured at the same time it is difficult to determine whether the exposures came first or followed the outcomes in a cross-sectional study. Therefore, it is difficult to establish cause and effect relationships. This is relevant in the context for the present review, as the research questions seek to investigate the impact of, for example, exposure to stress on classroom management. At best, cross-sectional studies indicate if there is a relationship between an exposure and an outcome but not the direction of the relationship, in other words what the cause was and what was the impact.

2.3 Structure of this report

The report presents the key findings for each research question separately. The results of the review are organised firstly, with a summary of the key characteristics of the studies; namely the research design, the samples recruited and geographical features, and thereafter with the findings.

Section 3 presents definitions and explanations of some of the key constructs that are investigated as part of this review. These constructs are stress, burnout, depression and anxiety. It ends with an overview of a conceptual framework for teachers’ occupational wellbeing which is used to inform, contextualise and present many of the findings of this review.

Section 4 provides an overview of the existing literature that examines the relationship of stress, burnout, anxiety and depression at the individual teacher level. The available research focused on teacher’s cognitive wellbeing, their physical and mental health and job satisfaction. (Research questions 1 and 2).

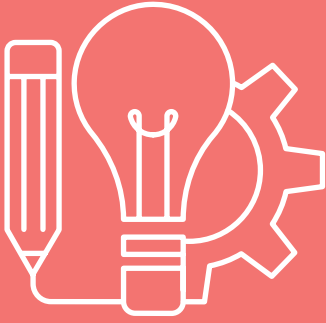
Section 5 explores the relationship of stress, burnout, anxiety and/or depression with factors that may affect the ability of staff to carry out their role. (Research question 3).

Section 6 examines the relationship between teacher stress, burnout, anxiety and/or depression, and outcomes for learners in schools. The outcomes addressed are: academic achievement; engagement (including concentration, satisfaction rates, motivation and behaviour); and learner wellbeing. (Research question 4).

The evidence from these four areas is then collated for a concluding discussion in Section 7, which also highlights gaps in the evidence and areas for future consideration.

¹⁰ ProQuest Central is the largest multidisciplinary database with over 11,000 titles, with over 8,000 titles in full-text. Over 160 subject areas are covered including business, education, economics, health and medical, news and world affairs, technology, social sciences and more. <https://about.proquest.com/libraries/>

¹¹ Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, 158(1), S65-S71.



Key concept definitions and conceptual framework for teacher occupational wellbeing

The following section presents the definitions and explanations of some of the key constructs that were investigated as part of this review. These constructs are stress, burnout, depression and anxiety. It ends with an overview of a conceptual framework for teachers' occupational wellbeing which is used to inform, contextualise and present many of the findings of this review.

3.1 What is stress?

Stress is part of our everyday working lives. However, overly challenging working conditions and high levels of stress are associated with negative implications for good physical health (e.g. headaches, stomach problems), good mental health (e.g. feeling overwhelmed, constantly worrying, anxiety) and behaviours (e.g. poor sleep, increased drinking, smoking and eating).¹² There is no universally agreed medical definition of stress, it is not something that can be psychiatrically diagnosed (except for PTSD and acute stress disorder etc). It is described as a reaction (physically, mentally and/or behaviourally) to mental or emotional pressure and is often related to a feeling of loss of control.¹³ Moreover, many physical disorders originate from stress, especially if the stress is severe and prolonged including implications for memory, cognition and learning, and the gastrointestinal (GI) system.¹⁴

In the literature focusing on teacher stress, there are two main approaches to defining stress: that of a stress response (e.g. tension) as a result of something outside of the individual (external factors, such as heavy workload); and the other perspective of stress is internal and how an individual interprets and reacts to their environment.¹⁵ Researchers have conceptualised stress as a dynamic process between internal and external attributes and defined it as the degree of mismatch between work demands made upon an individual and the individual's ability to draw on personal and social resources to cope with those demands.¹⁶

3.2 What is burnout?

Burnout is a complex phenomenon which involves individual (e.g. workload), organisational (e.g. sense of fairness and community), and institutional (e.g. values) aspects (Capone et al. 2019). Much of the empirical research in the education field and more broadly in the organisational psychology literature, defines burnout as a psychological syndrome that develops in response to chronic work stress. Like stress, burnout is not recognised as a medical condition in the same way as, for example, anxiety and depression. It is an occupational construct and

not related to broader life stressors beyond work. In 2019, the World Health Organisation (WHO) included burnout for the first time in the International Statistical Classification of Diseases and Related Health Problems (ICD) -11 section on problems related to employment, where it is described as a mismatch between workload and the resources needed to do the work in a meaningful way.¹⁷ According to this ICD-11 handbook, burnout is described as: (1) feelings of energy depletion or exhaustion; (2) increased mental distance, or feelings of negativism or cynicism related to one's job; and (3) reduced professional efficacy. Burnout describes the subjective experience of individuals in and of the workplace, the impact of which can have significant implications for individual employees, the culture of the work environment and ultimately an individual's effectiveness and contribution to society.¹⁸

3.3 What is depression?

Depression is defined as a low mood that can last for a long time or keep returning, affecting a person's everyday life.¹⁹ There are many different symptoms of depression which can vary widely between individuals. The symptoms come under three broad categories: psychological (e.g. feeling hopeless, irritable and having no motivation or interest in things), physical (e.g. speaking more slowly, loss of appetite and unexplained aches and pains) and social (e.g. avoiding contact with friends and taking part in fewer social activities). Unlike stress and burnout, depression is a disorder with diagnostic criteria. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5),²⁰ the diagnosis of depression requires five or more symptoms to be present within a two-week period. One of the symptoms should, at least, be either a depressed mood or loss of interest or pleasure. The secondary symptoms of depression are appetite or weight changes, sleep difficulties, agitation, fatigue or loss of energy, diminished ability to think or concentrate, feelings of worthlessness or excessive guilt, and suicidal thoughts. The severity of depression is determined by both the number and severity of symptoms, as well as the degree of functional impairment.

¹² National Health Service. Get help with stress - NHS (www.nhs.uk)

¹³ National Health Service. Get help with stress - NHS (www.nhs.uk)

¹⁴ Yari beygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI journal*, 16, 1057–1072. <https://doi.org/10.17179/excli2017-480>.

¹⁵ Harmsen, R., Helms-Lorenz, M., Maulana, R., van Veen, K., & van Veldhoven, M. (2019). Measuring general and specific stress causes and stress responses among beginning secondary school teachers in the Netherlands. *International Journal of Research & Method in Education*, 42(1), 91-108. <https://www.tandfonline.com/doi/full/10.1080/1743727X.2018.1462313>

¹⁶ McCarthy, C. J., Lambert, R. G., Lineback, S., Fitchett, P., & Baddouh, P. G. (2016). Assessing teacher appraisals and stress in the classroom: Review of the classroom appraisal of resources and demands. *Educational Psychology Review*, 28(3), 577-603. <https://doi.org/10.1007/s10648-015-9322-6>

¹⁷ International Classification of Diseases 11th Revision. <https://icd.who.int/en/>.

¹⁸ Hillert, A., Albrecht, A., & Voderholzer, U. (2020). The Burnout Phenomenon: A Résumé After More Than 15,000 Scientific Publications. *Frontiers in Psychiatry*, 11, 1373. <https://doi.org/10.3389/fpsy.2020.519237>

¹⁹ National Health Service. <https://www.nhs.uk/mental-health/conditions/depression/>

²⁰ American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

3.4 What is anxiety?

The DSM-5 diagnostic criteria for Generalised Anxiety Disorder (GAD) are:

1. The presence of excessive anxiety and worry about a variety of topics, events or activities which more often than not is for at least six months.
2. The worry is experienced as being very difficult to control.
3. The anxiety and worry are accompanied by at least three of the following physical or cognitive symptoms: restlessness, fatigue, impaired concentration, irritability, increased muscle ache or soreness, and sleeping difficulties.

A common measure used to identify depression and anxiety in research studies, including teacher depression and anxiety, is The Patient Health Questionnaire (PHQ);²¹ a diagnostic tool for mental health disorders consisting of five scales concerning depression, anxiety, somatoform,²² alcohol and eating.

3.5 The stress, burnout, depression and anxiety link

Having presented an account of the definitions of stress, burnout, depression and anxiety, at this point it is important to acknowledge the close relationship between all four constructs, as demonstrated in research (including teacher research) and in clinical practice.²³ One main concern is whether burnout is a form of depression or a distinct phenomenon at a psychological, biological and genetic level.²⁴ Results from studies that have tried to identify specific biomarkers (body characteristics which can be measured), for burnout, are inconsistent. The findings of a 2015 systematic literature review of 92 studies addressing the issue of burnout—depression overlap, reported that the distinction between burnout and depression was ‘conceptually fragile’.²⁵ A second area of debate is whether burnout

is an independent diagnosis and/or an intermediate risk stage for depression.²⁶ Moreover, burnout as a construct is problematic if it is used as a measure for the mental health of an individual rather than a description of their response to a work context. The reasons for this confusion are in part due to the lack of an agreed set of diagnostic criteria for burnout and that burnout research is not always sufficiently sensitive to the range of depressive disorders. The potential implications of such uncertainty are addressed in Section 7.

3.6 A conceptual framework for teachers’ occupational wellbeing

Alongside the research questions, the conceptual framework for teacher occupational wellbeing has been used to inform, contextualise and present many of the findings.²⁷ The framework is currently being developed as part of an OECD series of working papers and wider research seeking to investigate a comprehensive conceptual framework to analyse teachers’ occupational wellbeing and how it links with supporting quality teaching. The core concept of the framework defines teachers’ wellbeing around four main dimensions: mental and physical wellbeing, cognitive wellbeing, subjective wellbeing and social wellbeing (Figure 2). The review found studies that addressed the research questions and met the relevant criteria for all the dimensions apart from social wellbeing.²⁸ The four wellbeing dimensions are influenced by teachers’ working conditions at policy level (e.g. salary and professional standards) and their own individual school contexts (e.g. the physical environment and relationships with colleagues).

The four dimensions of teachers’ occupational wellbeing have two inward outcomes (effects) for teachers: an effect that is related to teachers’ work engagement and their willingness to stay in the profession, and an effect that is related to teachers’ levels of stress. Teachers’ occupational wellbeing also has outward outcomes in terms of the quality of learning and teaching which are measured by classroom processes and by direct outcomes on students’ wellbeing.

²¹ The Patient Health Questionnaire. <https://www.pfizerpcoa.com/patient-health-questionnaire-phq-screener>.

²² When physical symptoms suggest physical illness or injury but cannot be explained fully by a general medical condition and are due to mental factors.

²³ Martínez-Monteaigudo, M. C., Inglés, C. J., Granados, L., Aparisi, D., & García-Fernández, J. M. (2019). Trait emotional intelligence profiles, burnout, anxiety, depression, and stress in secondary education teachers. *Personality and Individual Differences*, 142, 53–61. <https://doi.org/10.1016/j.paid.2019.01.036>.

²⁴ Bakusic, J., Schaufeli, W., Claes, S., & Godderis, L. (2017). Stress, burnout and depression: A systematic review on DNA methylation mechanisms. *Journal of Psychosomatic Research*, 92, 34–44. <https://doi.org/10.1016/j.jpsychores.2016.11.005>.

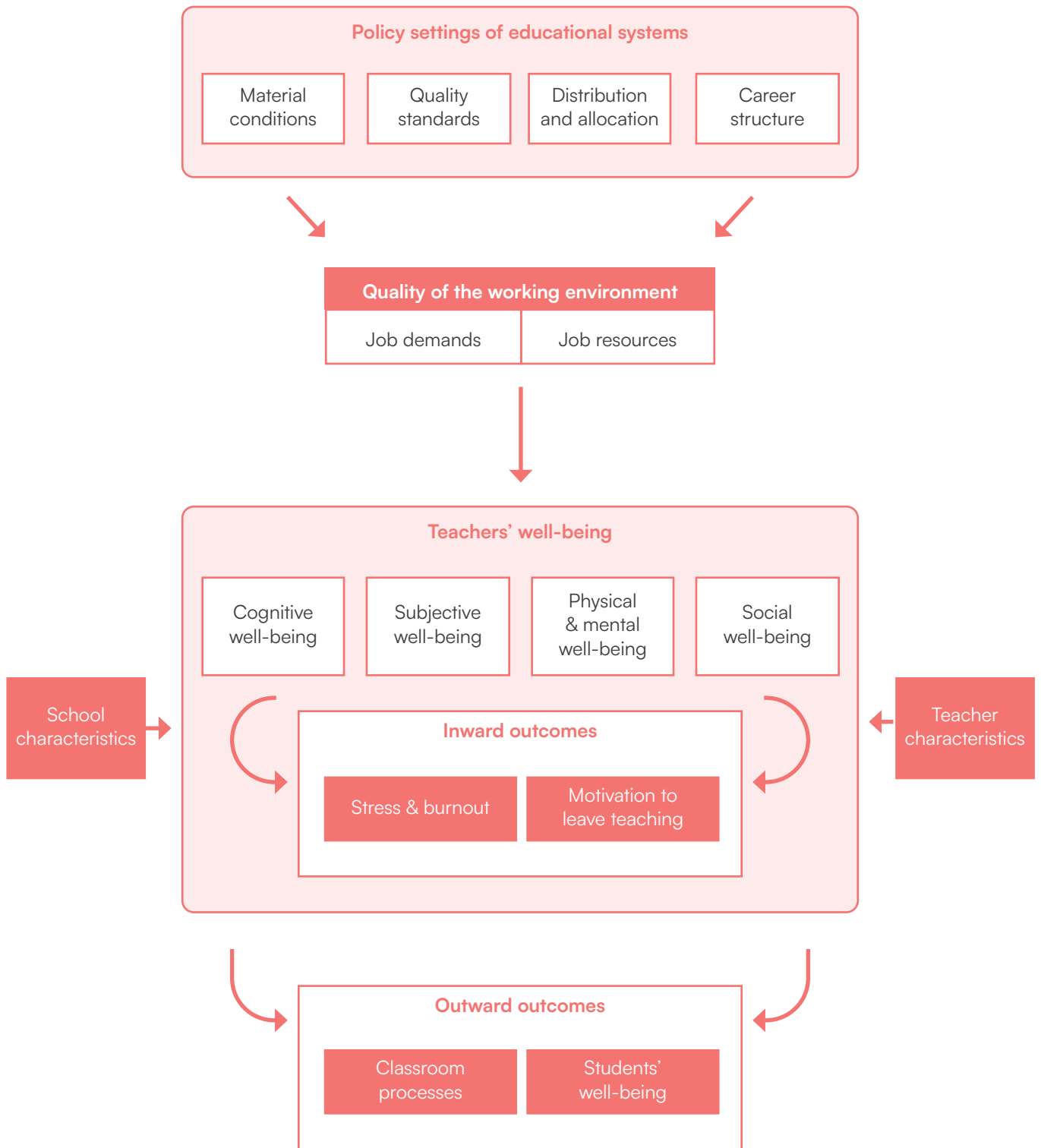
²⁵ Bianchi, R., Schonfeld, I. S., & Laurent, E. (2015). Burnout—depression overlap: A review. *Clinical psychology review*, 36, 28–41. <https://doi.org/10.1016/j.cpr.2015.01.004>.

²⁶ Hillert, A., Albrecht, A., & Voderholzer, U. (2020). The Burnout Phenomenon: A Résumé After More Than 15,000 Scientific Publications. *Frontiers in Psychiatry*, 11, 1373. <https://doi.org/10.3389/fpsy.2020.519237>

²⁷ Viac, C. & P. Fraser (2020), “Teachers’ well-being: A framework for data collection and analysis”, OECD Education Working Papers, No. 213, OECD Publishing, Paris, <https://doi.org/10.1787/c36fc9d3-en>.

²⁸ Defined in the framework as the social element in the relationship with colleagues, the head teacher and learners, and the feelings of trust amongst colleagues.

Figure 2: Conceptual framework for teachers' occupational wellbeing (Viac & Fraser, 2020)





Stress, burnout, anxiety and depression:

evidence of the impact for teachers' mental health and wellbeing at the individual level (Research questions 1 and 2)

This section provides an overview of the existing literature that examines the relationship of stress, burnout, anxiety and depression at the individual teacher level. The available research focused on teacher's cognitive wellbeing, their physical and mental health and job satisfaction.

4.1 The impact of stress and/or burnout on teachers' mental health (mental occupational wellbeing)

The first research question of this review focused on exploring evidence of how stress and/or burnout affects the mental health of teachers at the individual level. The searches found 16 studies that met the research criteria with all but two using quantitative designs ($n=14/16$). Eleven of the studies used cross-sectional designs with data gathered from standardised questionnaires or specifically designed questionnaires to investigate the association between stress and/or burnout and teacher mental health.^{29,30,31,32,33,34,35,36,37,38,39}

There was variation in sample size across these studies ranging from 53 teachers in the smallest sample to 3,361 in the largest study. In another three studies teacher surveys were adopted^{40,41,42} and two drew on interviews with teachers.^{43,44} The majority ($n=10$) of the studies were undertaken across Europe (with four in the UK) and six in North America. The participants in the majority of studies were drawn from across primary and secondary settings ($n=13/16$).

A finding that was generally consistent across the correlation studies included in this review ($n=11$) was the significant negative association between higher rates of stress or burnout and teachers' mental wellbeing (Table 1). This finding was consistent across different countries ($n=7$), with varying sample sizes (from 53 to 3,361), whether teachers were from primary or secondary settings and despite the different measures used to assess stress/burnout and mental health outcomes. There were two UK-based studies. The first was Kidger et al.'s (2016) study of teachers ($n = 555$) conducted in eight schools in England.⁴⁵ The researchers reported that poorer wellbeing,

as measured by the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS), was associated with finding one's job stressful ($p<0.001$) but the association was not significant for depressive symptoms. The second UK study of 399 Scottish secondary school teachers (156 males, 243 females, 18 schools), found that stress and depression ($p=.004$) was only significantly negatively associated for middle leaders.⁴⁶

Difficult working conditions and high levels of stress can result in mental ill health, which was reported in the three survey-based studies. TALIS 2018 reported that, on average, seven per cent of teachers reported that their job negatively impacted their mental health 'a lot' with the average for teachers in England higher at ten per cent. Forty-nine per cent of respondents to The Teacher Wellbeing Index Survey 2019, reported psychological symptoms (such as depression and anxiety) that they attributed to (or partly attributed to) experiencing stress at work, up two per cent from the previous year.⁴⁷ Furthermore, 14% of the Teacher's Union NASUWT survey respondents reported having increased or had started taking antidepressants and one in ten had undergone counselling in the previous 12 months (NASUWT 2019).

The findings from the quantitative studies were supported by the research drawn from teacher interviews. The teachers ($n=14$) in Shernoff et al.'s (2011) study in the United States reported feeling withdrawn, anxious, irritable and depressed as a reflection of the impact of stress on their emotional wellbeing. In another United States study ($n=28$), Richards et al. (2018) reported that it was mostly the high-burnout teachers who described their work as physically and emotionally exhausting with comments such as 'I feel like I have nothing more to give' and 'I felt like I couldn't do it anymore. I would be walking down the street and start crying when I thought about school.'

²⁹ Burić, I., Slišković, A., & Penezić, Z. (2019). Understanding teacher well-being: a cross-lagged analysis of burnout, negative student-related emotions, psychopathological symptoms, and resilience. *Educational Psychology, 39*(9), 1136-1155.

³⁰ Mulholland, R., McKinlay, A., & Sproule, J. (2013). Teacher interrupted: Work stress, strain, and teaching role. <https://journals.sagepub.com/doi/full/10.1177/2158244013500965>

³¹ Capone, V., Joshanloo, M., & Park, M. S. A. (2019). Burnout, depression, efficacy beliefs, and work-related variables among school teachers. *International Journal of Educational Research, 95*, 97-108.

³² Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning, 8*(1).

³³ Jones-Rincon, A., & Howard, K. J. (2019). Anxiety in the workplace: A comprehensive occupational health evaluation of anxiety disorder in public school teachers. *Journal of Applied Biobehavioral Research, 24*(1), e12133.

³⁴ Kidger, J., Brockman, R., Tilling, K., Campbell, R., Ford, T., Araya, R., & Gunnell, D. (2016). Teachers' wellbeing and depressive symptoms, and associated risk factors: A large cross sectional study in English secondary schools. *Journal of Affective Disorders, 192*, 76-82. https://www.researchgate.net/publication/287504812_Teachers_wellbeing_and_depressive_symptoms_and_associated_risk_factors_A_large_cross_sectional_study_in_English_secondary_schools

³⁵ Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atria, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*.

³⁶ Schonfeld, I. S., & Bianchi, R. (2016). Burnout and depression: two entities or one? *Journal of clinical psychology, 72*(1), 22-37.

³⁷ Sziget, R., Balázs, N., Bikfalvi, R., & Urbán, R. (2017). Burnout and depressive symptoms in teachers: Factor structure and construct validity of the Maslach Burnout inventory-educators survey among elementary and secondary school

teachers in Hungary. *Stress and Health, 33*(5), 530-539.

³⁸ Steinhart, M. A., Smith Jaggars, S. E., Faulk, K. E., & Gloria, C. T. (2011). Chronic work stress and depressive symptoms: Assessing the mediating role of teacher burnout. *Stress and health, 27*(5), 420-429.

³⁹ Wolfram, M., Bellingrath, S., Feuerhahn, N., & Kudielka, B. M. (2013). Emotional exhaustion and overcommitment to work are differentially associated with hypothalamus—pituitary—adrenal (HPA) axis responses to a low-dose ACTH1—24 (Synacthen) and dexamethasone—CRH test in healthy school teachers. *Stress, 16*(1), 54-64.

⁴⁰ Education Support Partnership. (2019). Teacher Wellbeing Index 2019. Education Support Partnership. https://www.educationsupport.org.uk/media/b1qbtmzl/teacher_wellbeing_index_2019.pdf

⁴¹ NASUWT. (2019). Big Question report 2019. <https://www.nasuwt.org.uk/uploads/assets/uploaded/981c20ce-145e-400a-805969e777762b13.pdf>

⁴² OECD (2019). TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals, TALIS, OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72beOb468ed3dac915593716de&itemIGO=oecd&itemContentType=book

⁴³ Shernoff, E. S., Mehta, T. G., Atkins, M. S., Torf, R., & Spencer, J. (2011). A qualitative study of the sources and impact of stress among urban teachers. *School mental health, 3*(2), 59-69.

⁴⁴ Richards, K. A. R., Hemphill, M. A., & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching: Theory and Practice, 24* (7), 768—787.

⁴⁵ see footnote 34

⁴⁶ see footnote 30

⁴⁷ 2019 Base: All education professionals ($n = 2,929$). 2018 Base: All education professionals ($n = 1,163$).

Table 1: Relationship between stress and/or burnout and teachers' mental health (cross-sectional studies, n = 11)

Authors	Country	Sample (N)	Female %	Primary or secondary	Findings
Buric et al. (2019) ⁴⁸	Croatia	941	83	Secondary	Burnout with negative emotions at both time points ⁴⁹ (p<0.01)
Capone et al. (2019)	Italy	609	76	Both	Burnout (emotional exhaustion and cynicism) with depression (p<0.001)
Ferguson et al. (2012)	Canada	274	Not stated	Both	Stress (workload & student behaviour) with depression (p<0.05)
Jones-Rincon & Howard (2019)	United States	3361	76	Both	Anxiety disorder with higher perceived stress levels, lower mental quality of life (p<0.001)
Kidgar et al. (2016)	UK	555	60	Secondary	Stress with poor wellbeing (p<0.001) based on WEMWBS
Molero et al. (2019)	Italy	500	67	Both	Burnout with depression (p<0.001)
Mulholland et al. (2013) ⁵⁰	Scotland	399	61	Secondary	Within one group only Stress with depression in middle leaders (p<0.001)
Schonfeld & Bianchi (2015) ⁵¹	United States	1386	77	All sectors	Burnout with depression (p<0.01)
Szigeti et al. (2017) ⁵²	Hungary	211	81	Both	Burnout with depression and overcommitment (p<0.05)
Steinhardt et al. (2011) ⁵³	United States	267	75	Both	Stress with depressive symptoms (p<0.001)
Wolfram et al. (2013) ⁵⁴	Germany	53	58	Both	Burnout with and higher plasma cortisol profiles (p <0.045)

⁴⁸ Buric, I., Slišković, A., & Penezić, Z. (2019). Understanding teacher well-being: a cross-lagged analysis of burnout, negative student-related emotions, psychopathological symptoms, and resilience. *Educational Psychology*, 39(9), 1136-1155.

⁴⁹ One longitudinal cross-sectional design.

⁵⁰ Mulholland, R., McKinlay, A., & Sproule, J. (2013). Teacher interrupted: Work stress, strain, and teaching role. <https://journals.sagepub.com/doi/full/10.1177/2158244013500965>

⁵¹ Schonfeld, I. S., & Bianchi, R. (2016). Burnout and depression: two entities or one? *Journal of clinical psychology*, 72(1), 22-37.

⁵² Szigeti, R., Balázs, N., Bikfalvi, R., & Urbán, R. (2017). Burnout and depressive symptoms in teachers: Factor structure and construct validity of the Maslach Burnout inventory-educators survey among elementary and secondary school teachers in Hungary. *Stress and Health*, 33(5), 530-539.

⁵³ Steinhardt, M. A., Smith Jaggars, S. E., Faulk, K. E., & Gloria, C. T. (2011). Chronic work stress and depressive symptoms: Assessing the mediating role of teacher burnout. *Stress and health*, 27(5), 420-429.

⁵⁴ Wolfram, M., Bellingrath, S., Feuerhahn, N., & Kudielka, B. M. (2013). Emotional exhaustion and overcommitment to work are differentially associated with hypothalamus—pituitary—adrenal (HPA) axis responses to a low-dose ACTH1–24 (Synacthen) and dexamethasone—CRH test in healthy school teachers. *Stress*, 16(1), 54-64.

4.2 The impact of stress and/or burnout on physical health (physical occupational wellbeing)

The first research question of this review also focused on exploring evidence of how stress and/or burnout affected the wider wellbeing of teachers at an individual level. The searches found eight records that were focused just on physical health or included physical health as part of a wider wellbeing study. Four of the studies used cross-sectional designs with data gathered from standardised questionnaires or specifically designed questionnaires to investigate the association between stress and/or burnout and teachers' physical health.^{55,56,57,58} There was variation in sample size across these studies ranging from 76 teachers in the smallest sample to 2,988 in the largest study. In the other four studies, teacher surveys were adopted.^{59,60,61,62} All but one of the eight studies were conducted in Europe and included teachers from primary and secondary settings.

Findings from all the eight studies did show that stress and/or burnout resulted in reduced teachers' physical health with sleep, somatization disorders,⁶³ headaches, exhaustion, fatigue, and voice tension the main symptoms reported. A Finnish study of 76 primary school teachers (female = 87%) found that burnout was associated

with higher levels of sleep onset problems ($p < 0.05$) and non-restorative sleep ($p < 0.05$).⁶⁴ The findings were based on the Maslach Burnout Inventory (MBI)⁶⁵, the Jenkins Sleep Problem Scale (JSPC)⁶⁶ and the Recovery Experience Questionnaire (REQ).⁶⁷ Similarly a United States study of 2,988 primary and secondary teachers (female = 87%) found that 31% of the sample met the criteria for somatization⁶⁸ (as measured by the Patient Health Questionnaire (PHQ)) and of that group, higher levels of stress, poorer physical quality of life, major depression, panic and anxiety disorder were significantly related with somatization disorder ($p < .05$) (as measured by the PHQ and the Perceived Stress Scale (PSS)).⁶⁹ In addition, teachers with somatization disorder were significantly more likely to report gastrointestinal disorders, neurological disorders, musculoskeletal disorders, and heart and pulmonary disorders. A third study based on a sample of 884 (female = 92%) French primary and secondary teachers found that sleeping problems (as measured by four items taken from the Recovery Sleep Questionnaire)⁷⁰ were significantly associated with workload stress where over-commitment was high ($p = < 0.025$) but not significant when over-commitment was low.

Another aspect of physical health studies was voice disorder. A Finnish study of 1198 (female = 81%) primary and secondary teachers found that 'work ability' (measured by the Work Ability Scale)⁷¹ was significantly associated with

⁵⁵ Gluschkoff, K., Elovainio, M., Kinnunen, U., Mullola, S., Hintsanen, M., Keltikangas-Järvinen, L., & Hintsala, T. (2016). Work stress, poor recovery and burnout in teachers. *Occupational medicine*, 66(7), 564-570. <https://doi.org/10.1093/occmed/kqw086>.

⁵⁶ Howard, K., Haskard-Zolnierok, K., Johnson, A., Roming, S., Price, R., & Cobos, B. (2017). Somatization disorder and stress in teachers: a comprehensive occupational health evaluation. *Journal of Applied Biobehavioral Research*, 22(4), e12105. <https://doi.org/10.1111/jabr.12105>.

⁵⁷ Vertanen-Greis, H., Loytyniemi, E., Uitti, J., & Putus, T. (2020). Work ability of teachers associated with voice disorders, stress, and the indoor environment: A questionnaire study in Finland. *Journal of Voice*. <https://doi.org/10.1016/j.jvoice.2020.09.022>.

⁵⁸ Huyghebaert, T., Gillet, N., Beltou, N., Tellier, F., & Fouquereau, E. (2018). Effects of workload on teachers' functioning: A moderated mediation model including sleeping problems and overcommitment. *Stress and Health*, 34(5), 601-611.

⁵⁹ Education Support Partnership. (2019). Teacher Wellbeing Index 2019. Education Support Partnership. https://www.educationsupport.org.uk/media/b1qbtmzl/teacher_wellbeing_index_2019.pdf

⁶⁰ NASUWT. (2019). Big Question report 2019. <https://www.nasuwat.org.uk/uploads/assets/uploaded/981c20ce-145e-400a-805969e777762b13.pdf>

⁶¹ OECD (2019). TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued professionals, TALIS. OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72be0b468ed3dac915593716de&itemIGO=oecd&itemContentType=book

⁶² Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' Health. *Deutsches Arzteblatt international*, 112(20), 347-356. <https://doi.org/10.3238/arztebl.2015.0347>.

⁶³ Somatoform disorder is characterised by multiple complaints that cannot be fully explained by any known general medical condition or the direct effect of a chemical substance.

⁶⁴ Gluschkoff, K., Elovainio, M., Kinnunen, U., Mullola, S., Hintsanen, M., Keltikangas-Järvinen, L., & Hintsala, T. (2016). Work stress, poor recovery and burnout in teachers. *Occupational medicine*, 66(7), 564-570. <https://doi.org/10.1093/occmed/kqw086>.

⁶⁵ In many of the studies included in this review, teachers were asked to complete a series of questions in the MBI which includes a series of 22 statements such as 'I feel emotionally drained from my work' and 'I have accomplished many worthwhile things in this job'. Teachers select the frequency from a list of seven options (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986).

⁶⁶ Jenkins, C. D., Stanton, B. A., Niemcryk, S. J., & Rose, R. M. (1988). A scale for the estimation of sleep problems in clinical research. *Journal of clinical epidemiology*, 41(4), 313-321. [https://www.jclinepi.com/article/0895-4356\(88\)90138-2/fulltext](https://www.jclinepi.com/article/0895-4356(88)90138-2/fulltext)

⁶⁷ Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: development and validation of a measure for assessing recuperation and unwinding from work. *Journal of occupational health psychology*, 12(3), 204. <https://psycnet.apa.org/doi/10.1037/1076-8998.12.3.204>

⁶⁸ Somatoform disorder is characterised by multiple complaints that cannot be fully explained by any known general medical condition or the direct effect of a chemical substance.

⁶⁹ Howard, K., Haskard-Zolnierok, K., Johnson, A., Roming, S., Price, R., & Cobos, B. (2017). Somatization disorder and stress in teachers: a comprehensive occupational health evaluation. *Journal of Applied Biobehavioral Research*, 22(4), e12105. <https://doi.org/10.1111/jabr.12105>.

⁷⁰ Jenkins, C. D., Stanton, B. A., Niemcryk, S. J., & Rose, R. M. (1988). A scale for the estimation of sleep problems in clinical research. *Journal of clinical epidemiology*, 41(4), 313-321. [https://www.jclinepi.com/article/0895-4356\(88\)90138-2/fulltext](https://www.jclinepi.com/article/0895-4356(88)90138-2/fulltext)

⁷¹ El Fassi, M., Bocquet, V., Majery, N., Lair, M. L., Couffignal, S., & Mairiaux, P. (2013). Work ability assessment in a worker population: comparison and determinants of Work Ability Index and Work Ability score. *BMC public health*, 13(1), 1-10. <https://doi.org/10.1186/1471-2458-13-305>.

stress and voice disorders ($p < 0.0001$).⁷² Voice disorders were investigated through a screening questionnaire consisting of questions about the occurrence of different vocal symptoms (including morning hoarseness, voice becoming strained or tired, voice becoming low or hoarse, voice breaks, difficulty in being heard, throat clearing or coughing and pain around the larynx) either every day, every week, less often, and never. Teachers who reported two or more voice symptoms occurring weekly or more often in the previous twelve months, were considered to have a voice disorder.

Findings from the surveys were less consistent in the number of participants reporting health problems due to work stress. TALIS 2018, for example, reported that, on average, six per cent of teachers reported that their job negatively affected their physical health 'a lot', with a higher average (10%) for teachers in England.⁷³ In contrast, 57% of teachers in the 2019 NASUWT⁷⁴ survey reported that their work had adversely affected their physical health in the past 12 months. The Teacher Wellbeing Index Survey 2019 reported that 78% of all educational professionals reported they had experienced at least one behavioural, physical or psychological symptom related to work (76% in 2018 and 75% in 2017). Compared with 2018, in 2019 in terms of physical symptoms there was an eight per cent increase in muscle tension (28% to 36%) and a six per cent increase in recurring headaches/migraines (29% to 35%) (Education Support 2019). Finally, a study of almost 800,000 German teachers in 2012-13, based on data derived from the German statutory health insurance scheme concerning medical disability, long-term illness, and inability to work, found that mental and psychosomatic diseases were more common in teachers than in non-teachers, as well as complaints such as exhaustion, fatigue, headache and tension.⁷⁵

4.3 The impact of stress and/or burnout on job satisfaction (subjective occupational wellbeing)

This review has found that job satisfaction was a third factor associated with stress and/or burnout. Job satisfaction (a sense of fulfilment and gratification from work) is an important aspect of life evaluation. There is an emerging body of research concerned with teacher job satisfaction as it is considered part of a teachers' subjective occupational wellbeing.⁷⁶ Findings from international and national surveys highlight variation in rates of teacher job satisfaction. TALIS 2018 found that teachers in England reported lower rates of satisfaction compared with the OECD average. On average across the OECD countries, 90% of teachers reported that, all in all, they were satisfied with their job, England has among the lowest share of teachers who are satisfied with their job (77%).⁷⁷ A 2019 survey carried out with 5,500 teachers in England by NASUWT,⁷⁸ reported that 57% of respondents were dissatisfied with their job.⁷⁹ However, in the same year, and in findings more in line with TALIS 2018 than NASUWT 2019, Ofsted reported higher rates of satisfaction with 73% of teachers in England (77% if head teachers are included) satisfied with their jobs, based on a sample of 2,293 teachers from 290 schools taken from a random sample of 1,000 schools.⁸⁰

⁷² Vertanen-Greis, H., Loyttyneimi, E., Uitti, J., & Putus, T. (2020). Work ability of teachers associated with voice disorders, stress, and the indoor environment: A questionnaire study in Finland. *Journal of Voice*. <https://doi.org/10.1016/j.jvoice.2020.09.022>.

⁷³ OECD (2019), TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued professionals, TALIS, OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72be0b468ed3dac915593716de&itemIGO=oecd&itemContentType=book

⁷⁴ NASUWT. (2019). Big Question report 2019. <https://www.nasuwt.org.uk/uploads/assets/uploaded/981c20ce-145e-400a-805969e777762b13.pdf>

⁷⁵ Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' Health. *Deutsches Arzteblatt international*, 112(20), 347–356. <https://doi.org/10.3238/arztebl.2015.0347>

⁷⁶ Viac, C. & P. Fraser (2020), "Teachers' well-being: A framework for data collection and analysis", OECD Education Working Papers, No. 213, OECD Publishing, Paris, <https://doi.org/10.1787/c36fc9d3-en>.

⁷⁷ OECD (2019), TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued professionals, TALIS, OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72be0b468ed3dac915593716de&itemIGO=oecd&itemContentType=book

⁷⁸ NASUWT. (2019). Big Question report 2019. <https://www.nasuwt.org.uk/uploads/assets/uploaded/981c20ce-145e-400a-805969e777762b13.pdf>

⁷⁹ No further information was available on the sample.

⁸⁰ Ofsted. (2019). Teacher well-being at work in schools and further education providers. <https://www.gov.uk/government/publications/teacher-well-being-at-work-in-schools-and-further-education-providers>.

The searches found five studies that investigated the relationship between stress and/or burnout with teachers' job satisfaction. The studies used cross-sectional designs with data gathered from standardised questionnaires or specifically designed questionnaires to investigate the association between stress and/or burnout and job satisfaction.^{81,82,83,84,85} There was variation in sample size across these studies ranging from 68 teachers in the smallest sample to 884 in the largest study. All but one of the five studies were conducted in Europe and included teachers from primary and secondary settings in each sample.

All five studies showed that there was a significant negative association with stress and teachers feeling satisfied with their jobs; where teacher job dissatisfaction did exist, there was a significant association with stress

(Table 2). The finding was consistent across different countries and for primary and secondary teachers. One of the largest studies with 546 (81% response rate) Norwegian secondary school teachers from ten high schools (randomly selected, large and small) across three counties in central Norway, found that those teachers who experienced burnout were at increased risk of low job satisfaction ($p < 0.001$); based on Maslach Burnout Inventory—Educators' survey (Skaalvik & Skaalvik 2017). Similarly, a study based on 121 primary school teachers (68% response rate) from eight schools in Dublin, Ireland, found that teachers with higher levels of perceived stress (using the Fimian teacher stress inventory) were more likely to experience low levels of job satisfaction ($p < 0.01$) (Reilly et al. 2014).

Table 2: Relationship between stress and/or burnout and job satisfaction (cross-sectional studies, n=5)

Authors	Country	Sample (N)	Female %	Primary or secondary	Findings
Ferguson et al. (2012) ⁸⁶	Canada	274	Not stated	Both	Stress & depression with job satisfaction ($p < 0.5$)
Huyghebaert et al. (2018) ⁸⁷	France	884	92	Both	Workload with job satisfaction ($p < 0.001$)
Molero et al. (2019) ⁸⁸	Italy	500	67	Both	Burnout with job satisfaction
Reilly et al. (2014) ⁸⁹	Ireland	121	68	Primary	Perceived stress with job satisfaction ($p < 0.01$) moderate negative association
Skaalvik & Skaalvik (2017) ⁹⁰	Norway	546	Not reported	Secondary	Burnout with job satisfaction ($p < 0.001$)

⁸¹ Reilly, E., Dhingra, K., & Boduszek, D. (2014). Teachers' self-efficacy beliefs, self-esteem, and job stress as determinants of job satisfaction. *International Journal of Educational Management*.

⁸² Huyghebaert, T., Gillet, N., Beltou, N., Tellier, F., & Fouquereau, E. (2018). Effects of workload on teachers' functioning: A moderated mediation model including sleeping problems and overcommitment. *Stress and Health*, 34(5), 601-611.

⁸³ Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atria, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*.

⁸⁴ Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education*, 20(1), 15-37.

⁸⁵ Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning*, 8(1).

⁸⁶ Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning*, 8(1).

⁸⁷ Huyghebaert, T., Gillet, N., Beltou, N., Tellier, F., & Fouquereau, E. (2018). Effects of workload on teachers' functioning: A moderated mediation model including sleeping problems and overcommitment. *Stress and Health*, 34(5), 601-611.

⁸⁸ Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atria, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*, 2019.

⁸⁹ Reilly, E., Dhingra, K., & Boduszek, D. (2014). Teachers' self-efficacy beliefs, self-esteem, and job stress as determinants of job satisfaction. *International Journal of Educational Management*.

⁹⁰ Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education*, 20(1), 15-37.

4.4 The impact of stress and/or burnout on intention to leave their job and/or the teaching profession (subjective wellbeing)

The fourth factor associated with stress and/or burnout found by the review was a relationship with teachers' intentions to leave the profession. Twenty-five per cent of teachers in the TALIS 2018 survey reported that they wanted to leave teaching within the next five years.⁹¹ England was above the OECD average with 29% of teachers overall reporting intention to leave (23% of this group were aged 50 or under). In the NASUWT survey, 74% of respondents reported that they had seriously considered leaving their current job in the past year and 67% had seriously considered leaving the profession (NASUWT 2019).

The searches found four studies that investigated the relationship between stress and/or burnout and teachers' intentions to leave their job and/or the profession. Three of these studies adopted cross-sectional designs with data gathered from standardised questionnaires or specifically designed questionnaires.^{92,93,94} There was variation in sample size across these studies ranging from 546 teachers in the smallest sample to 13,180 in the largest study. One study in the United States, adopted a qualitative approach based on interviews with teachers.⁹⁵ The studies were undertaken across Europe, North America and one in Australia with most participants for each study drawn from across primary and secondary settings (n=3/4).

All three of the correlation studies found that teachers with high levels of stress and/or burnout were more likely to report an intention to leave the profession. The most recent study, by Fitchett et al. (2021)⁹⁶ used data on 13,180 secondary teachers (female = 59%, from 1,740 schools) who responded to the 2007–2008 Schools and Staffing

Survey (SASS).⁹⁷ This examined how teachers' appraisals of their workplace environments correlated with their risk for stress, workplace fatigue and occupational commitment to remain in teaching. Schools with high concentrations of stress-vulnerable teachers were significantly associated with higher levels of average workplace fatigue and lower levels of occupational commitment ($p < 0.01$). A second study of 546 teachers from ten schools in three counties in central Norway, found that the strongest predictors of motivation to leave the profession were burnout ($b = .54$) and job satisfaction ($b = -.35$).⁹⁸ The final correlation study by Rajendran et al. (2020) based on 1,255 primary and secondary Australian teachers (female = 80%) indicated that job demands (workload, student misbehaviour) and the personal demands of work—family conflict, were associated with emotional exhaustion which in turn influenced intention to leave.⁹⁹ Both primary and secondary teachers in the study strongly agreed that their job created strain which made it difficult to fulfil family duties and that plans for family activities often had to be altered. The American teachers in interviews as part of Richards et al.'s (2018) study spoke about the demands of balancing family and teaching roles, 'my husband and I weren't doing well. We went to marriage counselling... everything just revolved around what I was doing in school' and 'retirement was something that would have never crossed my mind, but the added stress of the evaluations is too much... I have a friend... she retired because [teaching] was just not enjoyable anymore.'

⁹¹ Although it is important to note that this figure was 14% in respondents aged fifty years or less, indicating that the original figure might be explained by an ageing teaching workforce.

⁹² Fitchett, P. G., McCarthy, C. J., Lambert, R. G., Eyal, M., Playfair, E. C., & Dillard, J. B. (2021). Examining teacher stress-vulnerability in the US secondary school context. *Educational Review*, 73(2), 170–193. <https://doi.org/10.1080/00131911.2019.1619521>.

⁹³ Rajendran, N., Watt, H. M., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, 47(3), 477–500.

⁹⁴ Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education*, 20(1), 15–37.

⁹⁵ Richards, K. A. R., Hemphill, M. A. & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching: Theory and Practice*, 24 (7), 768–787.

⁹⁶ Fitchett, P. G., McCarthy, C. J., Lambert, R. G., Eyal, M., Playfair, E. C., & Dillard, J. B. (2021). Examining teacher stress-vulnerability in the US secondary school context. *Educational Review*, 73(2), 170–193. <https://doi.org/10.1080/00131911.2019.1619521>.

⁹⁷ The largest and most comprehensive survey of US school teachers.

⁹⁸ Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education*, 20(1), 15–37.

⁹⁹ Rajendran, N., Watt, H. M., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, 47(3), 477–500.

4.5 Anxiety and/or depression: evidence of the impact for teachers' mental health and wellbeing at the individual level (Research question 2)

The review found that it was common to include depression and/or anxiety along with many other factors such as absenteeism, physical health and job satisfaction in the cross-sectional studies. The searches found three studies using cross-sectional designs where depression and/or anxiety were the main constructs (as opposed to burnout and/or stress) under investigation.^{100,101,102} The sample size ranged from 274 teachers in the smallest sample to 3361 in the largest study. Two studies were undertaken in North America and one in England. The participants for most of the studies were from across primary and secondary settings (n=2/3).

Kidgar et al's. (2016) study of teachers (n = 555, response rate of 78.4%) in eight schools in England investigated depressive symptoms (using the Patient Health Questionnaire-PHQ-9) and associated risks. The study found that teachers with higher PHQ-9 scores were more likely to report feeling dissatisfied with work, presenteeism, sickness absence in the past month,

wanting to talk to a colleague but feeling unable to, and working at a school with below average pupil attendance (all $p < 0.001$). Stress at work, frequently providing support to a colleague, working at a school with a below outstanding Ofsted rating and working at a school with a recent or imminent conversion to an Academy were not strongly associated with depressive symptoms. One Canadian study, based on a sample of 274 teachers (48% response rate)¹⁰³ investigated anxiety and depression and found that depression, but not anxiety, was negatively associated with job satisfaction ($p < 0.5$) (Ferguson et al. 2012). The final study was based on 3,361 school teachers from 46 randomly selected school districts in Texas. Of the 3,003 teachers who completed the PHQ, those teachers who scored highly for anxiety disorder were significantly more likely to report absenteeism and higher intent to leave ($p < 0.001$).

¹⁰⁰ Kidger, J., Brockman, R., Tilling, K., Campbell, R., Ford, T., Araya, R., & Gunnell, D. (2016). Teachers' wellbeing and depressive symptoms, and associated risk factors: A large cross sectional study in English secondary schools. *Journal of Affective Disorders*, 192, 76-82. https://www.researchgate.net/publication/287504812_Teachers_wellbeing_and_depressive_symptoms_and_associated_risk_factors_A_large_cross_sectional_study_in_English_secondary_schools.

¹⁰¹ Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning*, 8(1).

¹⁰² Jones-Rincon, A., & Howard, K. J. (2019). Anxiety in the workplace: A comprehensive occupational health evaluation of anxiety disorder in public school teachers. *Journal of Applied Biobehavioral Research*, 24(1), e12133.

¹⁰³ The sample for the study consisted of teachers from northern Ontario enrolled in Nipissing University's inservice courses in winter session of 2005. To find teachers who lived in northern Ontario, researchers identified those teachers whose postal codes began with the letter "P." This postal code region covers a large area, including 25 different school boards.



Stress, burnout, anxiety and/or depression:

evidence of the impact for teachers' ability to carry out their role at school (Research question 3)

This review found evidence to show that stress, burnout, anxiety and/or depression affected teachers' ability to carry out their role in school in two ways, namely:

1. Impaired performance associated with a reduced sense of self-efficacy at work, and
2. Challenges with maintaining classroom management.

5.1 Impaired performance and reduced sense of self-efficacy at work (cognitive wellbeing)

Cognitive wellbeing closely relates to teachers' self-efficacy which concerns a teacher's belief in their ability to perform their role effectively, based on Bandura's social cognitive theory.¹⁰⁴ Self-efficacy refers to an individual's beliefs about their capabilities to successfully complete a task or specific course of action and ultimately, for teachers, the belief in their capability to make a difference to student learning including those students who struggle to engage in learning. If a teacher's cognitive (thinking) processes are negatively affected in any way, because of stress for example, they can experience 'cognitive weariness'.¹⁰⁵ This in turn may have implications for how a teacher can perform effectively whether that be with planning, teaching, classroom management or relationships with students, colleagues and parents.

A commonly used measure of teacher self-efficacy is, for example, the Teacher Self-Efficacy Scale.¹⁰⁶ Below are examples of some of the questions against which teachers are asked to enter: (1) not at all true; (2) barely true; (3) moderately true; and (4) exactly true:

- 1 I am convinced that I am able to successfully teach all relevant subject content to even the most difficult students.
- 2 I am convinced that, as time goes by, I will continue to become more and more capable of helping to address my students' needs.
- 3 Even if I get disrupted while teaching, I am confident that I can maintain my composure and continue to teach well.

- 4 I am confident in my ability to be responsive to my students' needs even if I am having a bad day.
- 5 If I try hard enough, I know that I can exert a positive influence on both the personal and academic development of my students.
- 6 I am convinced that I can develop creative ways to cope with system constraints (such as budget cuts and other administrative problems) and continue to teach well.

The searches found eight studies that met the research criteria with all but two using quantitative designs (n=6/8). Six of the studies used cross-sectional designs including a cross-sectional longitudinal¹⁰⁷ design to investigate the association between stress, burnout, depression and /or anxiety and teacher self-efficacy.^{108,109,110,111,112} There was variation in sample size across these studies ranging from 100 teachers in the smallest sample to 609 in the largest study. Two studies in the United States adopted a qualitative approach based on interviews with teachers.^{113,114} The majority (n= 6/8) of the studies were undertaken across Europe and two in North America. The participants for most of the studies were from across primary and secondary settings (n=6/8).

¹⁰⁴ Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ, 1986(23-28).

¹⁰⁵ Van Horn, J. et al. (2010). "The structure of occupational well-being: A study among Dutch teachers", *Journal of Occupational and Organizational Psychology*, Vol. 77/3, pp. 365–375. <http://www.wilmarschaufeli.nl/publications/Schaufeli/212.pdf>

¹⁰⁶ Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied psychology*, 57, 152-171. <https://doi.org/10.1111/j.1464-0597.2008.00359.x>

¹⁰⁷ Feuerhahn, N., Stamov-Roßnagel, C., Wolfram, M., Bellingrath, S., & Kudielka, B. M. (2013). Emotional exhaustion and cognitive performance in apparently healthy teachers: A longitudinal multi-source study. *Stress and Health*, 29(4), 297-306.

¹⁰⁸ Reilly, E., Dhirga, K., & Boduszek, D. (2014). Teachers' self-efficacy beliefs, self-esteem, and job stress as determinants of job satisfaction. *International Journal of Educational Management*.

¹⁰⁹ Arvidsson, I., Håkansson, C., Karlson, B., Björk, J., & Persson, R. (2016). Burnout among Swedish school teachers—a cross-sectional analysis. *BMC public health*, 16(1), 1-11.

¹¹⁰ Capone, V., Joshanloo, M., & Park, M. S. A. (2019). Burnout, depression, efficacy beliefs, and work-related variables among school teachers. *International Journal of Educational Research*, 95, 97-108.

¹¹¹ Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atria, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*.

¹¹² Savas, A. C., Bozgeyik, Y., & Eser, İ. (2014). A Study on the Relationship between Teacher Self Efficacy and Burnout. *European Journal of Educational Research*, 3(4), 159-166.

¹¹³ Shernoff, E. S., Mehta, T. G., Atkins, M. S., Torf, R., & Spencer, J. (2011). A qualitative study of the sources and impact of stress among urban teachers. *School mental health*, 3(2), 59-69.

¹¹⁴ Richards, K. A. R., Hemphill, M. A., & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching: Theory and Practice*, 24 (7), 768–787.

A finding consistent across five of the six correlation studies was that teachers who reported higher rates of burnout or stress were more likely to report a reduced sense of self-efficacy and/or cognitive impairment (Table 3). One Swedish study, for example, based on a sample of 490 teachers (64% response rate) across seven Swedish municipalities teaching learners aged four to nine, found that burnout was significantly associated with a feeling of reduced self-efficacy ($p < 0.0001$) (Arvidson et al. 2016). One study that did not find a negative association between perceived stress and self-efficacy was Reilly et al.'s (2014) study of 121 Irish primary school teachers. A possible explanation for this finding, provided by the authors, is that teachers reporting higher levels of teaching self-efficacy may have greater expectations of themselves to perform effectively and successfully in their job roles. They may hold unrealistic and idealistic expectations, work harder but in doing so, may experience greater stress overall.

The findings from the longitudinal cross-sectional study presented a more complex account of the relationship (Feuerhahn et al. 2013). In a sample of 100 teachers (recruited via newspaper advertisements) data was collected at two time points, six months apart. Cognitive performance was assessed by self-rated cognitive stress symptoms, self-rated and peer-rated cognitive impairments in everyday tasks and a neuropsychological test of learning and memory, and job performance by self-reports. The findings showed that at time point one, burnout¹¹⁵ was significantly negatively related to cognitive performance as assessed by self-rating and peer-rating, as well as neuropsychological testing (all $p < 0.05$). However, at time point two, there was only a significant negative relationship between burnout and cognitive stress symptoms ($p < 0.05$). At both time points, contrary to the study's hypothesis, burnout was not associated with job performance.¹¹⁶

Table 3: Relationship between stress/burnout and teacher self-efficacy (cross-sectional research designs, n=6)

Authors	Country	Sample (N)	Female %	Primary or secondary	Findings
Arvidson et al. (2016) ¹¹⁷	Sweden	490	73	Both	Burnout & self-efficacy ($p < 0.0001$)
Capone et al. (2019) ¹¹⁸	Italy	609	76	Both	Burnout & self-efficacy ($p < 0.01$)
Feuerhahn et al. (2013) ^{119,120}	Germany	100	63	Not provided	EE ¹²¹ & cognitive stress symptoms & cognitive impairments in everyday tasks ($p < 0.05$)
Molero et al. (2019) ¹²²	Italy	500	67	Both	Burnout & personal efficacy ($p < 0.001$)
Reilly et al. (2014) ¹²³	Ireland	121	68	Primary	No relationship between perceived stress and self-efficacy
Savas ¹²⁴	Turkey	163	69	Both	Burnout & self-efficacy ($p < 0.001$)

¹¹⁵ Based on Emotional Exhaustion (just one element of three on the MBI).

¹¹⁶ Please see the paper for the authors detailed account for possible explanations.

¹¹⁷ Arvidsson, I., Håkansson, C., Karlson, B., Björk, J., & Persson, R. (2016). Burnout among Swedish school teachers—a cross-sectional analysis. *BMC public health*, 16(1), 1-11.

¹¹⁸ Capone, V., Joshanloo, M., & Park, M. S. A. (2019). Burnout, depression, efficacy beliefs, and work-related variables among school teachers. *International Journal of Educational Research*, 95, 97-108.

¹¹⁹ Feuerhahn, N., Stamov-Roßnagel, C., Wolfram, M., Bellingrath, S., & Kudielka, B. M. (2013). Emotional exhaustion and cognitive performance in apparently healthy teachers: A longitudinal multi-source study. *Stress and Health*, 29(4), 297-306.

¹²⁰ Longitudinal cross-sectional research design.

¹²¹ Emotional Exhaustion (one element of three on the MBI).

¹²² Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atría, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*.

¹²³ Reilly, E., Dhingra, K., & Boduszek, D. (2014). Teachers' self-efficacy beliefs, self-esteem, and job stress as determinants of job satisfaction. *International Journal of Educational Management*.

¹²⁴ Savas, A. C., Bozgeyik, Y., & Eser, İ. (2014). A Study on the Relationship between Teacher Self Efficacy and Burnout. *European Journal of Educational Research*, 3(4), 159-166.

The findings from two qualitative studies based on interviews with teachers, provided insight into the lived experience of reduced cognitive wellbeing and/or self-efficacy. In interviews with fourteen primary school teachers (female = 12) from three schools in the United States, Shernoff et al. (2011) reported how teachers found that as a result of stress, they often lost concentration in class which affected their work performance (e.g. 'I lose track of what I was about to say... I'm kind of stressed out that it's [disruptive behaviours] happening again and, you know, I'm like 'ok what was I doing next' and I can't concentrate during lessons').¹²⁵ Another United States study based on interviews with 28 teachers (female = 17) spoke of teachers becoming frustrated when students and parents did not seem to care about education, with one teacher commenting on 'a constant battle between how much I am helping the students and how much they are helping themselves' and another, 'Instead of really teaching physics, I teach a lot more about how you learn, how you study.'¹²⁶ Many of the teachers also spoke about not having autonomy or control over much of their work either through close management control and/or restrictions on curriculum content.

5.2 Classroom management self-efficacy

In addition to a global understanding of self-efficacy, researchers have also begun to recognise the multidimensional nature of teacher self-efficacy through constructs such as instructional efficacy, engagement efficacy and classroom management efficacy. In this section we focus on two reviews that investigated classroom management self-efficacy (CMSE) and burnout, defining CSME as efficacy for controlling disruptive behaviour, calming and responding to disruptive students and establishing a routine in order to keep learning activities running smoothly.¹²⁷ Aloe et al. (2014) conducted a multivariate meta-analysis¹²⁸ of sixteen studies that met the study's inclusion criteria. Results from the sixteen studies indicated that there is a significant relationship (0.85 or above) between CSME and burnout based on Maslach's three dimensions of burnout (emotional exhaustion, depersonalisation and (lowered) personal accomplishment) suggesting that teachers with higher levels of CMSE are less likely to experience feelings of burnout.¹²⁹ These findings were consistent with another study based on a narrative review of 11 studies that reported negative associations between teacher self-efficacy and all three dimensions of the MBI burnout scales.¹³⁰

¹²⁵ Shernoff, E. S., Mehta, T. G., Atkins, M. S., Torf, R., & Spencer, J. (2011). A qualitative study of the sources and impact of stress among urban teachers. *School mental health, 3*(2), 59-69.

¹²⁶ Richards, K. A. R., Hemphill, M. A. & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching: Theory and Practice, 24* (7), 768–787.

¹²⁷ Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational psychology review, 26*(1), 101-126.

¹²⁸ A way to examine results accumulated from a series of related studies, through statistical analyses of those many results.

¹²⁹ Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational psychology review, 26*(1), 101-126.

¹³⁰ Brown, C.G.. (2012). A systematic review of the relationship between self-efficacy and burnout in teachers. *Educational and Child Psychology, 29*. 47-63.



Evidence of the impact of teachers' experience of stress, burnout, anxiety and/or depression on learner outcomes

(Research question 4)

This section provides an account of the findings from the literature that examined whether there is a relationship between teacher stress, burnout, depression and/or anxiety and outcomes for learners in schools. The outcomes of the studies addressed academic achievement, engagement (including concentration, satisfaction rates, motivation and behaviour) and learner wellbeing.

Ten of the 11 studies found for this aspect of the review used quantitative designs. They predominantly used data from standardised questionnaires completed by teachers and standardised assessments completed by learners to investigate any association between teacher mental health and wellbeing and learner outcomes.^{131,132,133,134,135,136,137,138,139,140} There was variation in sample size across these studies ranging from 15 teachers and 320 learners in the smallest sample to 1,102 teachers and 22,002 learners in the largest study. The studies were undertaken in Europe, North America and New Zealand¹⁴¹ and were predominantly based on participants (teachers and learners) from primary aged settings (n=9/11). One study adopted a qualitative approach including interviews with teachers and focus groups with learners in ten English primary schools.¹⁴²

6.1 Academic achievement/attainment

Four of five quantitative studies found that teacher stress was associated with poorer academic attainment, specifically with lower standardised test scores in reading ability¹⁴³, literacy¹⁴⁴ and mathematics.^{145,146} The associations were statistically significant with small-to-medium effect sizes. One United States study based on a sample of 121 teachers and 1,817 learners across nine schools found a

significant association between teacher stress and lower test scores in mathematics but not in reading, as measured by the Woodcock-Johnson tests of achievement.¹⁴⁷ Two of the studies (Germany¹⁴⁸ and United States¹⁴⁹) used school grades as a measure of attainment but neither found any association between teacher stress and learner academic attainment even when, as in the case of the German study, an association was found with the test of standardised reading.

Possible reasons for the relationship between teachers' stress and learners' academic attainment in the quantitative studies was illuminated by a qualitative study (Glazzard and Rose, 2020) that investigated the impact of teacher wellbeing and mental health on the progress of learners. The findings were based on interviews with 35 educational professionals (teachers and headteachers) and discussion groups with 64 learners (year 3) across ten primary schools in England.¹⁵⁰ Both the teachers and the pupils reported a negative impact on learning if a teacher was experiencing stress. From the pupils' perspectives the negative impact was associated with reduced concentration, working in silence so as not to upset the teacher further, reluctance to ask questions if confused and feeling the need to rush their work if the teacher was in a 'bad mood' or stressed.

¹³¹ Arens, A.K., & Morin, A.J.S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108, 800–813. <http://doi.org/10.1037/edu0000105>.

¹³² Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>.

¹³³ Hoglund, W. L., Klinge, K. E., & Hosan, N. E. (2015). Classroom risks and resources: Teacher burnout, classroom quality and children's adjustment in high needs elementary schools. *Journal of School Psychology*, 53(5), 337–357. <https://doi.org/10.1016/j.jsp.2015.06.002>.

¹³⁴ Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108(8), 1193–1203. <https://doi.org/10.1037/edu0000125>.

¹³⁵ Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700–712. <https://doi.org/10.1037/a0027268>.

¹³⁶ Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30–37. <https://doi.org/10.1016/j.socscimed.2016.04.031>.

¹³⁷ Ramberg, J., Brolin Låftman, S., Åkerstedt, T., & Modin, B. (2020). Teacher stress and students' school well-being: The case of upper secondary schools in Stockholm. *Scandinavian Journal of Educational Research*, 64(6), 816–830. <https://doi.org/10.1080/00313831.2019.1623308>.

¹³⁸ Braun, S. S., Schonert-Reichl, K. A., & Roeser, R. W. (2020). Effects of teachers' emotion regulation, burnout, and life satisfaction on student well-being. *Journal of Applied Developmental Psychology*, 69, 101151. <https://doi.org/10.1016/j.appdev.2020.101151>.

¹³⁹ Harding, S., Morris, R., Gunnell, D., Ford, T., Hollingworth, W., Tilling, K., Evans, R., Bell, S., Grey, J., Brockman, R., Campbell, R., Araya, R., Murphy, S., & Kidger, J. (2019). Is teachers' mental health and wellbeing associated with students' mental health and wellbeing? *Journal of affective disorders*, 242, 180–187. <https://doi.org/10.1016/j.jad.2018.08.080>

¹⁴⁰ Denny, S. J., Robinson, E. M., Utter, J., Fleming, T. M., Grant, S., Milfont, T. L., Crengle, S., Ameratunga, S. N., & Clark, T. (2011). Do schools influence student risk-taking behaviors and emotional health symptoms? *Journal of Adolescent Health*, 48(3), 259–267. <https://doi.org/10.1016/j.jadohealth.2010.06.020>

¹⁴¹ Four in the US, two in Germany, two in Canada, one in New Zealand, one in Sweden, one in England and Wales.

¹⁴² Glazzard, J. and Rose, A. (2020), "The impact of teacher well-being and mental health on pupil progress in primary schools", *Journal of Public Mental Health*, Vol. 19 No. 4, pp. 349–357. <https://doi.org/10.1108/JPMH-02-2019-0023>.

¹⁴³ Arens, A.K., & Morin, A.J.S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108, 800–813. <http://doi.org/10.1037/edu0000105>.

¹⁴⁴ Hoglund, W. L., Klinge, K. E., & Hosan, N. E. (2015). Classroom risks and resources: Teacher burnout, classroom quality and children's adjustment in high needs elementary schools. *Journal of School Psychology*, 53(5), 337–357. <https://doi.org/10.1016/j.jsp.2015.06.002>.

¹⁴⁵ Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>.

¹⁴⁶ Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108(8), 1193–1203. <https://doi.org/10.1037/edu0000125>.

¹⁴⁷ Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>.

¹⁴⁸ Arens, A.K., & Morin, A.J.S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108, 800–813. <http://doi.org/10.1037/edu0000105>.

¹⁴⁹ Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700–712. <https://doi.org/10.1037/a0027268>.

¹⁵⁰ Glazzard, J. and Rose, A. (2020), "The impact of teacher well-being and mental health on pupil progress in primary schools", *Journal of Public Mental Health*, Vol. 19 No. 4, pp. 349–357. <https://doi.org/10.1108/JPMH-02-2019-0023>.

6.2 Learner motivation and attitudes towards learning

Two of the five studies that statistically examined outcomes relevant to learner engagement (including concentration, satisfaction rates, motivation and behaviour), found an association between teacher stress and learner outcomes. One Swedish study with a sample of 1,045 secondary school teachers and 5,367 learners found negative associations between school-level teacher stress, fatigue and depressed mood and students' school satisfaction ($p < 0.001$) and perceived teacher caring ($p < 0.01$).¹⁵¹ Arens and Morin (2016) in their German study of 380 teachers and 7,899 primary aged learners found that teacher exhaustion was associated with learners' lower levels of school satisfaction, albeit with a small effect size (-0.8).¹⁵² However, in two United States primary school studies (2012 and 2015), teacher burnout was not found to be associated with learner engagement.^{153,154} A fifth Canadian (2020) study based on 15 teachers and 320 primary aged learners found no association between teacher burnout (as measured by the MBI) and student pro-social behaviour.¹⁵⁵

6.3 Wellbeing of learners

One study based on a sample of 1,182 teachers and 3,216 year 8 learners from 25 secondary schools across England and Wales¹⁵⁶ found that better teacher wellbeing was associated with better student wellbeing (a small standardised effect= 0.07), and lower student psychological distress (a small standardised effect= -0.10). In addition, higher levels of teacher depressive symptoms were associated with poorer student wellbeing and psychological distress (a small standardised effect= -0.06). Student and teacher

wellbeing was measured by the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)¹⁵⁷ and student psychological distress was measured using the Strengths and Difficulties Questionnaire (SDQ).¹⁵⁸ A second study, based on a Canadian sample of 15 teachers and 320 primary aged learners found an association between teacher burnout (using MBI) and students' hypothalamic-pituitary-adrenal (HPA)¹⁵⁹ functioning as measured through the collection of salivary cortisol in learners at 9 a.m., 11:30 a.m., and 2 p.m. in the classroom setting on one day.¹⁶⁰ Teacher burnout was only predictive of students' morning cortisol (used as an indicator of stress) and not at midday or the afternoon.

However, this trend was not common across other studies that specifically addressed student wellbeing. Braun et al. (2020) in their Canadian study of 15 teachers from different primary schools across two school districts in British Columbia Canada, showed that teacher burnout was not associated with emotional distress (anxiety, depression and emotional control). A New Zealand study based on 2,992 education professionals and 9,056 students across 96 secondary schools reported that teachers' student-related burnout was not associated with attempted suicide in the preceding 12 months or displayed risk behaviours (e.g., alcohol, violence, sexual health).¹⁶¹ Similarly, a United States study of 102 teachers and 1,450 secondary learners found that total burnout was not associated with students' positive outlook (optimism and happiness) although exhaustion (an element of burnout) at baseline was associated with lower depression measured at follow-up.¹⁶² However, the authors did note that due to the small subsamples in the study, these findings should be treated with caution.

¹⁵¹ Ramberg, J., Brolin Låftman, S., Åkerstedt, T., & Modin, B. (2020). Teacher stress and students' school well-being: The case of upper secondary schools in Stockholm. *Scandinavian Journal of Educational Research*, 64(6), 816-830. <https://doi.org/10.1080/00313831.2019.1623308>.

¹⁵² Arens, A.K., & Morin, A.J.S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108, 800-813. <http://doi.org/10.1037/edu0000105>.

¹⁵³ Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700-712. <https://doi.org/10.1037/a0027268>.

¹⁵⁴ Hoglund, W. L., Klinge, K. E., & Hosan, N. E. (2015). Classroom risks and resources: Teacher burnout, classroom quality and children's adjustment in high needs elementary schools. *Journal of School Psychology*, 53(5), 337-357. <https://doi.org/10.1016/j.jsp.2015.06.002>.

¹⁵⁵ Braun, S. S., Schonert-Reichl, K. A., & Roeser, R. W. (2020). Effects of teachers' emotion regulation, burnout, and life satisfaction on student well-being. *Journal of Applied Developmental Psychology*, 69, 101151. <https://doi.org/10.1016/j.appdev.2020.101151>.

¹⁵⁶ Harding, S., Morris, R., Gunnell, D., Ford, T., Hollingworth, W., Tilling, K., Evans, R., Bell, S., Grey, J., Brockman, R., Campbell, R., Araya, R., Murphy, S., & Kidger, J. (2019). Is teachers' mental health and wellbeing associated with students' mental health and wellbeing? *Journal of affective disorders*, 242, 180-187. <https://doi.org/10.1016/j.jad.2018.08.080>

¹⁵⁷ The Warwick-Edinburgh Mental Wellbeing Scales. <https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs>.

¹⁵⁸ The Strengths and Difficulties Questionnaire (SDQ) <https://www.sdqinfo.org/a0.html>.

¹⁵⁹ The hypothalamic-pituitary-adrenal (HPA) axis is a person's central stress response system. It intertwines the central nervous system and endocrine system.

¹⁶⁰ Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30-37. <https://doi.org/10.1016/j.socscimed.2016.04.031>.

¹⁶¹ Denny, S. J., Robinson, E. M., Utter, J., Fleming, T. M., Grant, S., Milfont, T. L., Crengle, S., Ameratunga, S. N., & Clark, T. (2011). Do schools influence student risk-taking behaviors and emotional health symptoms? *Journal of Adolescent Health*, 48(3), 259-267. <https://doi.org/10.1016/j.jadohealth.2010.06.020>

¹⁶² Herman, K. C., Prewett, S. L., Eddy, C. L., Savala, A., & Reinke, W. M. (2020). Profiles of middle school teacher stress and coping: Concurrent and prospective correlates. *Journal of school psychology*, 78, 54-68. <https://doi.org/10.1016/j.jsp.2019.11.003>.



Concluding discussion and implications

The main aim of this review was to identify the evidence base of the impact of stress, burnout, depression and/or anxiety on the mental health and wellbeing of the teaching profession. Specifically, it considered:

Stress and burnout[†]: Evidence of the impact for teachers' mental health and wellbeing at the individual level (Research question 1).

Anxiety and/or depression: Evidence of the impact for teachers' mental health and wellbeing at the individual level (Research question 2).

Stress, burnout[†], anxiety and/or depression: Evidence of the impact for teachers' ability to carry out their role at school (Research question 3).

Stress, burnout[†], anxiety and/or depression: Evidence of the impact of teachers' experience of stress, anxiety and/or depression on learner outcomes (Research question 4).

It is recognised that anxiety and depression are diagnosable disorders, and it is also recognised that a relationship exists between stress, burnout, anxiety and depression. The review has taken this into account.

[†] Burnout was not originally part of the original research questions, but added when found important to include after the scoping study.

7.1 Review strengths and limitations

There were two main limitations to this review. First, in seeking to improve the validity of the findings, by ensuring a well-defined population, 42 studies met the inclusion criteria. A larger number of studies would have added further depth and breadth including, for example, studies that focused solely on specific groups of teachers (e.g. early career teachers, subject specialists and headteachers) but would have made drawing meaningful comparisons and identifying trends across the research problematic. A second limitation was to include four broad research questions, which prevented the depth of analysis that we would have liked to include. However, the inclusion of the four questions, means that this is one of the first studies with the breadth to review a complex but highly interrelated field. In doing so the findings also contribute to current knowledge as to what to consider when investigating the path from teacher stress to its impact for learner outcomes.

7.2 Key findings*

7.2.1 Evidence for the impact of stress, burnout, anxiety and depression

There are obvious trends in the findings across the studies reviewed, although it is not possible to draw definitive conclusions from the current empirical evidence base about the impact of stress, burnout, depression and anxiety on teacher's mental health and wellbeing.

- The evidence suggests that if a teacher experiences stress and/or burnout they are more likely to have: (1) mental and physical ill health; (2) less job satisfaction; and (3) intentions to leave their job and/or the teaching profession.
- There is some limited evidence to suggest that if a teacher experiences anxiety they are at increased risk of absenteeism and having intentions of leaving their job and/or the teaching profession.
- There is evidence to suggest that teachers with depression are at increased risk of feeling dissatisfied with work, presenteeism and absenteeism.
- Some teachers with reduced mental health and wellbeing are at greater risk of experiencing reduced self-efficacy to carry out their role generally and specifically in relation to classroom management.

7.2.2 Evidence for the impact on learner outcomes

There is some evidence to show an association between teacher stress, burnout, depression and/or anxiety with poorer learner academic achievement, learner engagement (including concentration, satisfaction rates, motivation and behaviour) but less evidence for learner wellbeing.

7.2.3 Lack of research about the impact of stress, burnout, anxiety and depression

The field is under-researched in the UK and internationally. This was particularly evident in respect to: (1) teachers' physical health; and (2) the impact of depression and anxiety for teachers as individuals, for how they carry out their role and for learners in school.

7.2.4 Limited variety of research designs investigating the field

The majority of studies used a cross-sectional design which is important for finding an association between, for example, stress and teachers' physical health. The use of cross-sectional studies does not allow for investigating the direction of causation and the trajectory of symptoms, such as, to what extent does stress and/or burnout cause depression rather than does depression act as a cause of stress and/or burnout? Moreover, there were very few studies that qualitatively investigated the lived experience of the impact of stress and burnout and the implications of teacher mental health and wellbeing and whether, for example, it changed over an academic school year.

7.2.5 Multitude of ways in which mental health is measured

The authors recorded over sixty different measures used in the cross-sectional studies included in this review. These measures included different standardised mainly self-report questionnaires for the same constructs (e.g. burnout), a reduced number of question items taken from a standardised assessment and questionnaires devised by the authors specifically for a study. This makes it very challenging to directly compare and have greater confidence in the findings and common trends from different studies. It also speaks to a wider issue of a lack of consensus concerning how we effectively measure the different aspects of teacher occupational wellbeing.

* This review does not include research relating to teacher wellbeing during the Covid-19 pandemic



Recommendations for further research

Based on the review findings overall, the following actions and areas for investigation are recommended:

- Although the lack and type of evidence did not allow for definitive conclusions, the trends indicate worrying implications of poor teacher mental health and wellbeing. These are sufficient to warrant the need for **national policy and evidence informed targeted strategies in school that emphasise the need to prevent teacher stress and/or burnout and support for teachers if they do experience poor mental health and wellbeing.** A recent literature review of strategies to support teacher wellbeing in schools¹⁶³ included, for example, the provision of support, mentoring and training and strategies to foster resilience and mindfulness. These would help to both prevent and support teachers to manage some of the negative effects of stress described in this review, such as teachers' reduced sense of self efficacy and ability to perform different aspects of their role including classroom management. The emerging evidence to support the benefits of supervision for education professionals would be one way to practically implement support for teacher cognitive wellbeing.¹⁶⁴
- Funders should look to commission **further research on the impact of stress, burnout, depression and anxiety** based on a range of research designs, such as longitudinal and multi-level mixed methods designs to frame investigations. This would allow for greater confidence in the knowledge and understanding garnered and therefore, in the actions of school leaders, policy makers and researchers, to improve prevention and intervention strategies for teacher mental ill health and wellbeing.
- Researchers, practitioners and relevant organisations should investigate the feasibility of reaching some **consensus around the constructs and measures of teacher occupational wellbeing** to allow for findings of research studies to be compared more meaningfully and to support a more coherent and shared understanding of the field.

¹⁶³ CooperGibson Research. (2019). School and college staff wellbeing: evidence from England, the UK and comparable sectors. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937601/Wellbeing-literature-review_final18052020_ap.pdf

¹⁶⁴ Reid, H., & Soan, S. (2018). Providing support to senior managers in schools via 'clinical' supervision: a restorative and purposeful professional and personal space. *Professional Development in Education*. ISSN 1941-5257

References

- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational psychology review*, 26(1), 101-126.
-
- American Psychiatric Association, DSM-5 Task Force. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™* (5th ed.). American Psychiatric Publishing, Inc.
<https://doi.org/10.1176/appi.books.9780890425596>
-
- Arens, A.K., & Morin, A.J.S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108, 800-813. <http://doi.org/10.1037/edu0000105>
-
- Arvidsson, I., Håkansson, C., Karlson, B., Björk, J., & Persson, R. (2016). Burnout among Swedish school teachers—a cross-sectional analysis. *BMC public health*, 16(1), 1-11.
-
- Bakusic, J., Schaufeli, W., Claes, S., & Godderis, L. (2017). Stress, burnout and depression: A systematic review on DNA methylation mechanisms. *Journal of psychosomatic research*, 92, 34-44.
<https://doi.org/10.1016/j.jpsychores.2016.11.005>
-
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ, 1986 (23-28).
-
- Bianchi, R., Schonfeld, I. S., & Laurent, E. (2015). Burnout—depression overlap: A review. *Clinical psychology review*, 36, 28-41. <https://doi.org/10.1016/j.cpr.2015.01.004>
-
- Braun, S. S., Schonert-Reichl, K. A., & Roeser, R. W. (2020). Effects of teachers' emotion regulation, burnout, and life satisfaction on student well-being. *Journal of Applied Developmental Psychology*, 69, 101151.
<https://doi.org/10.1016/j.appdev.2020.101151>
-
- Brown, C.G. (2012). A systematic review of the relationship between self-efficacy and burnout in teachers. *Educational and Child Psychology*, 29, 47-63.
-
- Burić, I., Slišković, A., & Penezić, Z. (2019). Understanding teacher well-being: a cross-lagged analysis of burnout, negative student-related emotions, psychopathological symptoms, and resilience. *Educational Psychology*, 39(9), 1136-1155.
-
- Capone, V., Joshanloo, M., & Park, M. S. A. (2019). Burnout, depression, efficacy beliefs, and work-related variables among school teachers. *International Journal of Educational Research*, 95, 97-108.
-
- CooperGibson Research. (2019). *School and college staff wellbeing: evidence from England, the UK and comparable sectors*.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937601/Wellbeing-literature-review_final18052020_ap.pdf
-
- Denny, S. J., Robinson, E. M., Utter, J., Fleming, T. M., Grant, S., Milfont, T. L., Crengle, S., Ameratunga, S. N., & Clark, T. (2011). Do schools influence student risk-taking behaviors and emotional health symptoms? *Journal of Adolescent Health*, 48(3), 259-267.
<https://doi.org/10.1016/j.jadohealth.2010.06.020>
-
- DfE. (2021). *The Education Staff Wellbeing Charter*.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984134/Education_staff_wellbeing_charter_2021.pdf
-
- Education Support Partnership. (2019). *Teacher Wellbeing Index 2019*. Education Support Partnership.
https://www.educationsupport.org.uk/media/b1qbtmzl/teacher_wellbeing_index_2019.pdf
-
- El Fassi, M., Bocquet, V., Majery, N., Lair, M. L., Couffignal, S., & Mairiaux, P. (2013). Work ability assessment in a worker population: comparison and determinants of Work Ability Index and Work Ability score. *BMC public health*, 13(1), 1-10. <https://doi.org/10.1186/1471-2458-13-305>
-
- Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning*, 8(1).
-
- Feuerhahn, N., Stamov-Roßnagel, C., Wolfram, M., Bellingrath, S., & Kudielka, B. M. (2013). Emotional exhaustion and cognitive performance in apparently healthy teachers: A longitudinal multi-source study. *Stress and Health*, 29(4), 297-306.
-
- Fitchett, P. G., McCarthy, C. J., Lambert, R. G., Eyal, M., Playfair, E. C., & Dillard, J. B. (2021). Examining teacher stress-vulnerability in the US secondary school context. *Educational Review*, 73(2), 170-193.
<https://doi.org/10.1080/00131911.2019.1619521>
-

- Glazzard, J. and Rose, A. (2020), "The impact of teacher well-being and mental health on pupil progress in primary schools", *Journal of Public Mental Health*, 19(4), 349–357. <https://doi.org/10.1108/JPMH-02-2019-0023>
- Gluschkoff, K., Elovainio, M., Kinnunen, U., Mullola, S., Hintsanen, M., Keltikangas-Järvinen, L., & Hintsala, T. (2016). Work stress, poor recovery and burnout in teachers. *Occupational medicine*, 66(7), 564-570. <https://doi.org/10.1093/occmed/kqw086>
- Harding, S., Morris, R., Gunnell, D., Ford, T., Hollingworth, W., Tilling, K., Evans, R., Bell, S., Grey, J., Brockman, R., Campbell, R., Araya, R., Murphy, S., & Kidger, J. (2019). Is teachers' mental health and wellbeing associated with students' mental health and wellbeing? *Journal of affective disorders*, 242, 180-187. <https://doi.org/10.1016/j.jad.2018.08.080>
- Harmsen, R., Helms-Lorenz, M., Maulana, R., van Veen, K., & van Veldhoven, M. (2019). Measuring general and specific stress causes and stress responses among beginning secondary school teachers in the Netherlands. *International Journal of Research & Method in Education*, 42(1), 91-108. <https://www.tandfonline.com/doi/full/10.1080/1743727X.2018.1462313>
- Health and Safety Executive, (2018). Health and safety statistics. Key figures for Great Britain (2019/20). www.hse.gov.uk/statistics/
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>
- Herman, K. C., Prewett, S. L., Eddy, C. L., Savala, A., & Reinke, W. M. (2020). Profiles of middle school teacher stress and coping: Concurrent and prospective correlates. *Journal of school psychology*, 78, 54-68. <https://doi.org/10.1016/j.jsp.2019.11.003>
- Hillert, A., Albrecht, A., & Voderholzer, U. (2020). The Burnout Phenomenon: A Résumé After More Than 15,000 Scientific Publications. *Frontiers in Psychiatry*, 11, 1373. <https://doi.org/10.3389/fpsy.2020.519237>
- Hoglund, W. L., Kingle, K. E., & Hosan, N. E. (2015). Classroom risks and resources: Teacher burnout, classroom quality and children's adjustment in high needs elementary schools. *Journal of School Psychology*, 53(5), 337-357. <https://doi.org/10.1016/j.jsp.2015.06.002>
- Howard, K., Haskard-Zolnierok, K., Johnson, A., Roming, S., Price, R., & Cobos, B. (2017). Somatization disorder and stress in teachers: a comprehensive occupational health evaluation. *Journal of Applied Biobehavioral Research*, 22(4), e12105. <https://doi.org/10.1111/jabr.12105>
- Huyghebaert, T., Gillet, N., Beltou, N., Tellier, F., & Fouquereau, E. (2018). Effects of workload on teachers' functioning: A moderated mediation model including sleeping problems and overcommitment. *Stress and Health*, 34(5), 601-611.
- Jenkins, C. D., Stanton, B. A., Niemcryk, S. J., & Rose, R. M. (1988). A scale for the estimation of sleep problems in clinical research. *Journal of clinical epidemiology*, 41(4), 313-321. [https://www.jclinepi.com/article/0895-4356\(88\)90138-2/fulltext](https://www.jclinepi.com/article/0895-4356(88)90138-2/fulltext)
- Jones-Rincon, A., & Howard, K. J. (2019). Anxiety in the workplace: A comprehensive occupational health evaluation of anxiety disorder in public school teachers. *Journal of Applied Biobehavioral Research*, 24(1), e12133.
- Kidger, J., Brockman, R., Tilling, K., Campbell, R., Ford, T., Araya, R., & Gunnell, D. (2016). Teachers' wellbeing and depressive symptoms, and associated risk factors: A large cross sectional study in English secondary schools. *Journal of Affective Disorders*, 192, 76–82. https://www.researchgate.net/publication/287504812_Teachers'_wellbeing_and_depressive_symptoms_and_associated_risk_factors_A_large_cross_sectional_study_in_English_secondary_schools
- Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108(8), 1193–1203. <https://doi.org/10.1037/edu0000125>
- Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1986). *Maslach Burnout Inventory*, 21, 3463-3464. Palo Alto, CA: Consulting psychologists press.
- Martínez-Monteagudo, M. C., Inglés, C. J., Granados, L., Aparisi, D., & García-Fernández, J. M. (2019). Trait emotional intelligence profiles, burnout, anxiety, depression, and stress in secondary education teachers. *Personality and Individual Differences*, 142, 53-61. <https://doi.org/10.1016/j.paid.2019.01.036>
- McCarthy, C. J., Lambert, R. G., Lineback, S., Fitchett, P., & Baddouh, P. G. (2016). Assessing teacher appraisals and stress in the classroom: Review of the classroom appraisal of resources and demands. *Educational Psychology Review*, 28(3), 577-603. <https://doi.org/10.1007/s10648-015-9322-6>
- McCarthy, C.J. (2019). Teacher stress: Balancing demands and resources. *Phi Delta Kappan*, 101 (3), 8-14. <https://kappanonline.org/teacher-stress-balancing-demands-resources-mccarthy/>

Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Atria, L., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2019). Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school teachers. *BioMed research international*, 2019.

Mulholland, R., McKinlay, A., & Sproule, J. (2013). *Teacher Interrupted: Work Stress, Strain and Teaching Role*. Sage Open, 3(3), 2158244013500965. <https://journals.sagepub.com/doi/full/10.1177/2158244013500965>

NASUWT, (2019). Big Question report 2019. <https://www.nasuwt.org.uk/uploads/assets/uploaded/981c20ce-145e-400a-805969e777762b13.pdf>

Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30-37. <https://doi.org/10.1016/j.socscimed.2016.04.031>

OECD (2019), TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued professionals, TALIS, OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/19cf08df-en/1/3/3/index.html?itemId=/content/publication/19cf08df-en&_csp_=67e65b72be0b468ed3dac915593716de&itemI GO=oecd&itemContentType=book

Ofsted, (2019). Teacher well-being at work in schools and further education providers. <https://www.gov.uk/government/publications/teacher-well-being-at-work-in-schools-and-further-education-providers>

Rajendran, N., Watt, H. M., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, 47(3), 477-500.

Ramberg, J., Brolin Låftman, S., Åkerstedt, T., & Modin, B. (2020). Teacher stress and students' school well-being: The case of upper secondary schools in Stockholm. *Scandinavian Journal of Educational Research*, 64(6), 816-830. <https://doi.org/10.1080/00313831.2019.1623308>

Reid, H., & Soan, S. (2018). Providing support to senior managers in schools via 'clinical' supervision: a restorative and purposeful professional and personal space. *Professional Development in Education*. ISSN 1941-5257

Reilly, E., Dhingra, K., & Boduszek, D. (2014). Teachers' self-efficacy beliefs, self-esteem, and job stress as determinants of job satisfaction. *International Journal of Educational Management*.

Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700-712. <https://doi.org/10.1037/a0027268>

Richards, K. A. R., Hemphill, M. A. & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching: Theory and Practice*, 24(7), 768-787.

Savas, A. C., Bozgeyik, Y., & Eser, İ. (2014). A Study on the Relationship between Teacher Self Efficacy and Burnout. *European Journal of Educational Research*, 3(4), 159-166.

Scheuch, K., Haufe, E., & Seibt, R. (2015). Teachers' Health. *Deutsches Arzteblatt international*, 112(20), 347-356. <https://doi.org/10.3238/arztebl.2015.0347>

Schonfeld, I. S., & Bianchi, R. (2016). Burnout and depression: two entities or one? *Journal of clinical psychology*, 72(1), 22-37.

Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, 57, 152-171. <https://doi.org/10.1111/j.1464-0597.2008.00359.x>

Shernoff, E. S., Mehta, T. G., Atkins, M. S., Torf, R., & Spencer, J. (2011). A qualitative study of the sources and impact of stress among urban teachers. *School mental health*, 3(2), 59-69.

Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education*, 20(1), 15-37.

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: development and validation of a measure for assessing recuperation and unwinding from work. *Journal of occupational health psychology*, 12(3), 204. <https://psycnet.apa.org/doi/10.1037/1076-8998.12.3.204>

Steinhardt, M. A., Smith Jaggars, S. E., Faulk, K. E., & Gloria, C. T. (2011). Chronic work stress and depressive symptoms: Assessing the mediating role of teacher burnout. *Stress and health*, 27(5), 420-429.

Szigeti, R., Balázs, N., Bikfalvi, R., & Urbán, R. (2017). Burnout and depressive symptoms in teachers: Factor structure and construct validity of the Maslach Burnout inventory-educators survey among elementary and secondary school teachers in Hungary. *Stress and Health*, 33(5), 530-539.

Van Horn, J. et al. (2010), "The structure of occupational well-being: A study among Dutch teachers", *Journal of Occupational and Organizational Psychology*, 77(3), 365-375. <http://www.wilmarschaufeli.nl/publications/Schaufeli/212.pdf>

Vertanen-Greis, H., Loyttyneimi, E., Uitti, J., & Putus, T. (2020). Work ability of teachers associated with voice disorders, stress, and the indoor environment: A questionnaire study in Finland. *Journal of Voice*. <https://doi.org/10.1016/j.jvoice.2020.09.022>

Viac, C. & P. Fraser (2020), "Teachers' well-being: A framework for data collection and analysis", *OECD Education Working Papers*, No. 213, OECD Publishing, Paris, <https://doi.org/10.1787/c36fc9d3-en>.

Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, 158(1), S65-S71.

Wolfram, M., Bellingrath, S., Feuerhahn, N., & Kudielka, B. M. (2013). Emotional exhaustion and overcommitment to work are differentially associated with hypothalamus—pituitary—adrenal (HPA) axis responses to a low-dose ACTH1—24 (Synacthen) and dexamethasone—CRH test in healthy school teachers. *Stress*, 16(1), 54-64.

Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI journal*, 16, 1057-1072. <https://doi.org/10.17179/excli2017-480>.

Appendix: Search parameters

Table 2: Literature search inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
UK & International 2011-2021	Counsellor educators
Search term within title.	Teachers of SEND Other specific groups PE/ science/ITT
English language	Specific events in a region e.g. earthquakes
All teachers in provision offered to pupils 4 – 18	

Table 3: Relevant databases and websites

Websites	Database
ONS	ProQuest ¹⁶⁵
OECD	EBSCO
WHO	Emerald
EUROSTAT	Scopus
DfE	JSTOR
Ofsted	Web of Science
TES	ERIC
Chartered College of Teaching	Education Administration
Heads Together	Social Science Citation index
Mentally Healthy Schools (Anna Freud)	Global Health
Teach Well Alliance	MEDLINE
Devolved Education Departments	Public Health Database
General Teaching Council for Scotland	ScienceDirect
Google	PubMed
	Psyc.INFO
	Directory of Open Access Journals
	Google Scholar

Table 4: Search term matrix

All searches comprise a combination of keyword terms, initially with one each from columns A, and B, and then A, B and C below. These are extended as the search progresses.

A		B		C
teacher*	+	stress	+	impact
school*		anxiety		effect*
educat**		depression		workload
education*		burnout		relationship*
education workforce		health (allow for physical + mental)		turnover
education staff		wellbeing		student*
		well-being		pupil*
		absenteeism		learner*
		presenteeism		learning
		satisfaction (allow for job and health)		

¹⁶⁵ ProQuest Central is the largest multidisciplinary database with over 11,000 titles, with over 8,000 titles in full-text. Over 160 subjects areas are covered including business, education, economics, health and medical, news and world affairs, technology, social sciences and more. <https://about.proquest.com/libraries/>



Education Support
40A Drayton Park, London, N5 1EW

+44 (0) 20 7697 2750
educationsupport.org.uk



Registered Charity No. 1161436
© 2021 Education Support

ISBN: 978-1-7399860-0-1