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Factors that lead to positive or negative stress in secondary school teachers of mathematics and science

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Abstract

This paper explores the factors that contribute to the development of positive stress and distress in teachers within secondary schools in England. It draws on narrative interviews undertaken with twelve mathematics and science teachers in six schools and focuses on three of these teachers to explore issues in more depth. The findings demonstrate that the use by teachers of appropriate coping mechanisms, e.g. actively seeking out preferable alternatives, and access to professional and personal support, with the right frame of mind, namely, seeing stressors as capable of being overcome, can produce desirable consequences for the teachers through their use of stress in a positive, healthy manner and lessen the likelihood of negative long-term effects associated with distress.

Keywords: Teachers, self-efficacy, motivation, stress

Introduction

Within the psychology of emotions, positive stress (eustress) has been distinguished as a separate entity from distress; eustress is associated with goal-orientated behaviour (Seyle, 1974) and research has documented that there are different forms of stress (Beehr et al., 2000; Cavanaugh et al., 2000). In addition, research has found that eustress promotes positive striving and emotions, which leads to good health, stimulates people and produces positive outcomes (Nelson & Simmons, 2003; Folkman & Moskowitz, 2004). Expressed anger, as a result of workplace stress, is associated with job satisfaction as expressions of anger encourage organisations and individuals to resolve professional problems which results in workplace productively (Tafrate & Kassinove, 2009). When stressed individuals appraise professional stressors in a positive way this has been found to be associated with positive outcomes (Lepine et al., 2004). Yet very little is known about what factors contribute to the development of eustress within the teaching profession and how eustress may promote positive growth amongst teachers. Currently the general focus of research on teacher stress is almost exclusively on its negative aspects. Any positive impact of stress, for example the possibility that it enhances teachers' job performance and increases self-efficacy, motivation and creativity, appears to have been lost in the current debate, with a great deal of focus over the past thirty years on distress (e.g. Kyriacou & Sutcliffe, 1978; Skaalvik & Skaalvik, 2010; Klassen & Chiu, 2011; Sharplin et al., 2011).

Sources of stress within the teaching profession

Some of the common sources of stress characteristic of the teaching profession are teaching pupils who lack motivation, maintaining discipline, time pressures and workload, coping with change,

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being evaluated by others, dealing with colleagues, role-overload, low self-esteem and status, administration and management, role conflict and ambiguity and poor working conditions (Kyriacou, 2000; Kokkinos, 2007; Skaalvik & Skaalvik, 2008; 2010; Klassen & Chiu, 2010; 2011). Current research fails to reach a consensus as to what causes the highest levels of teacher stress, which is possibly due to the lack of consensus or focus on methods of measuring stress, coupled with not differentiating between different types of stress. Kyriacou (1987; 2000) cites poor pupil motivation and reports that the effort required to teach unmotivated pupils on a daily basis is the most important form of stress that teachers come across. On the other hand, Smith and Bourke (1992) suggest that high levels of teacher stress are associated with lack of rewards and recognition, whilst Evans (1997) attributes teacher stress to pay levels and perceived low status in society. It is possible that these discrepancies may be due, at least in part, to research studies using differing definitions of stress which would significantly impact conclusions and comparisons that can be drawn across studies. Job overload and workload plus a shortage of time featured extensively in a number of different studies (e.g. Papastyliaou et al., 2009). Poor school conditions as sources of stress have also been cited (Skaalvik & Skaalvik, 2010), as has pupil behaviour (Geving, 2007), while the working environment provides multiple contexts for burnout (Grayson & Alvarez, 2008; Pyhalto et al., 2011). Research focusing on teacher depression as a result of stress found new teachers' 'self-efficacy' and feelings of depression were strongly related to the goal structure of the school culture, collaborative interactions with colleagues (particularly when new teachers have difficulties and/or work in a goal-orientated environment), the quality of mentoring support and the quality of meetings with the principal (Devos et al., 2012).

Since the introduction of the National Curriculum in 1988, schools in England have moved from being the least state-controlled system in the world to the most (Bassegy, 2008), leading to less professional autonomy and more public accountability. Policy-driven approaches to accountability increase competition between schools and between departments within schools. Some schools, given their contexts, are more impacted by a market-driven society than others (Leithwood, 2001). In addition, science, mathematics and English departments are more under scrutiny than those of other subjects as these three subjects are the core ones in the National Curriculum and so are subject to particular testing and reporting arrangements. In England at the age of 16 most students take examinations in the General Certificate of Secondary Education (GCSE) in approximately eight to twelve subjects. Perhaps the most important benchmark used in annual public performance tables in judging schools in England is the percentage of students who obtain five grade A* - C GCSE passes including mathematics and English. The government's agenda for improving the education system, after the introduction of the National Curriculum, has had an impact on the teaching profession with a shift away from teachers wanting to do a good job because of their own work ethic to having to do a good job because of government-imposed agendas (Travers & Cooper, 2006). The implementation of professional, more business-focused approaches to accountability suggests that school leaders find themselves increasingly having to stay on top of best professional practices which means having more involvement in monitoring their teachers' individual work in order to raise professional standards. Unfortunately, external judgements about schools lead to internal judgements on departments and individual teachers, in part because of publicly available examination results, which mean that management approaches to accountability can have unintended and possibly negative consequences. A number of studies have documented negative influences of head teachers' behaviour on teachers' job satisfaction, morale and motivation of teachers (e.g. Evans, 1997).

Individual differences in the development of stress

It is difficult to ascertain which aspects of a teacher's job, and in what combinations, will result in a high level of stress for particular individuals, and therefore it is important to note that 'one must assume that degree of stress is a function of the number and mix of teaching events' (Pettigrew & Wolf, 1982, p. 376). However, even this definition of the impact of the degree of stress, like most

teacher education research, fails to differentiate between distress and eustress. A prerequisite to finding interventions to alleviate the problem of distress and burnout would be to identify the main contributory factors. The same would apply when tapping into and utilising benefits of eustress. Pettigrew and Wolf's definition also does not recognise the importance of individual differences in the development of teacher stress. Early research focused almost exclusively on environmental factors that may precipitate stress (e.g. Cooper & Marshall, 1976; Miles & Perreault, 1976; Dunham, 1984). Although the teaching profession can be very stressful, some research (e.g. Klassen & Chiu, 2010) has indicated that accounting for individual differences is crucial for understanding the variation in teacher stress; while teachers within a particular comparable setting will all be exposed to similar job factors and environmental stressors, not everyone will suffer from distress.

Personal values can cause stress as they are internal demands that teachers expect of themselves and those around them (Maslach, 1982; Klassen & Chiu, 2010). Individuals' current resources, perceptions and past experiences will dictate whether the impact of a potential stressor can be overcome. An understanding of one's own personal values, with an open-minded approach to adjusting values in situations of internal conflict, or similarly recognising which values are of high importance and striving to maintain them, can help to reduce the impact of negative stress. Research within the medical world indicates that reflecting on personal values can lower the impact of psychological and neuroendocrine responses to distress; self-affirming activities can buffer the adverse effects of stress and reduce the development of physical and mental disorders (Taylor et al., 2003).

Research seems to suggest that there is no one main cause of stress in teachers and only in recent times has there been a focus on the inter-relationships between professional context, personal lives and individual characteristics coming together to give rise to distress (e.g. Gu & Day, 2007; Klassen & Chiu, 2010) though research has yet to explore adequately factors that give rise to eustress. Perceptions of stress are dependent on individual characteristics and contextual situations, which explains why different research points to different types of stressors, supported by the notion that stress is a highly subjective experience.

Why examine positive teacher stress?

We base our theoretical framework on the work conducted by positive psychologists. Positive psychology is the global term used for the study of positive emotions, human characteristics and the positive ethic of institutions that facilitates the development of individuals (Seligman & Steen, 2005; Seligman, 2008). Positive psychology is an emerging tradition that is shifting from the conventional concerns of the psychological tradition in repairing issues that are wrong in the lives of people to that of having a focus on constructing desirable qualities to help provide a buffer against illnesses caused by distress. This movement moves from viewing human issues from a negative perspective to that of a positive stance; in many ways this is different to the research on teacher stress which has almost always focussed on distress. Those within the positive psychology tradition also indicate that it is not necessarily the case that positive emotions are the opposite of negative ones. Research within positive psychology indicates that negative and positive emotions are stable independent factors largely using separate neural substrates (Davidson et al., 2000; Fredrickson, 2003) and that there is an upward spiralling effect of positive emotions in that those who experience positive emotions have a tendency to find meaning in negative events which then feeds into experiencing progressively more positive emotions in future professional or personal events (Fredrickson & Joiner, 2002). The use of positive emotions in dissipating negative ones has been established (Fredrickson, 1998) and our case studies of teachers in England schools will indicate how some teachers have indeed used such techniques. In fact, there is evidence to suggest that the impact of negative emotions on the cardiovascular system can be reversed with the use of positive emotions (Tugade & Fredrickson, 2004; Seligman, 2008). Research has also documented the relationship between resilient personalities and positive emotions and the ways in which these serve to buffer stress (Fredrickson, 2003; Tugade & Fredrickson, 2004). Positive psychologists have

also established the use of positive intervention techniques in order to increase pleasure, engagement and meaning to life whilst decreasing anxiety symptoms and depression (Park et al., 2004; Seligman et al., 2006). Research in positive psychology indicates that although mental disorders hinder positive states, they do not prevent the development of positive accomplishment, positive relationships, purpose and positive emotions (Seligman, 2002; Haidt, 2006; Seligman, 2008; Lyubomirsky & Dickerhoof, 2010) and this paper will highlight how some secondary school teachers in England schools have used positive relationships to find a professional purpose and move forward with finding more positive meaningful outcomes in their working lives.

In line with the work of positive psychologists, recent evidence on teacher self-efficacy points to the finding that the presence or absence of positive experiences has a stronger impact on self-efficacy than negative experiences, while the removal of negative experiences is not enough to promote commitment and self-efficacy (Kitching et al., 2009; Morgan et al., 2010). Positive psychology can be used as a prevention therapy against mental illness by building on the positive traits of teachers, reinforcing healthy work experiences and building optimism in the workplace. If positive teacher stress and its influence were simply due to the absence of negative stress, then there would not be a need to explore the positive impact of stress as research would be able to deduce the impact of eustress simply by presuming it to be the opposite of all the negative effects of teacher stress. This paper therefore explores in what circumstances eustress can develop in the teaching profession by drawing on the conceptual framework of positive psychologists.

Methodology

Methods

Narrative-type interviews were considered by us to be an effective way to uncover issues related to stress; they enabled the study to explore teachers' variableness in the development of stress. Narrative interviews allow the interviewee to relate their work histories in an order that is meaningful to themselves (Mishler, 1986). The study wanted to discern changes within an individual teacher across their own life course, as well as looking across teachers, particularly since research indicates that teachers' personalities contribute to how they perceive and react to stressors and thus what is distressful for one teacher may not be for another (e.g. Klassen & Chiu, 2010). The initial interview instruments were developed from the findings of a quantitative phase (see Mujtaba, under revision). The quantitative findings did not indicate that gender was a statistically significant factor in the development of distress or eustress; in addition, given that the qualitative work built on the quantitative findings and that the central research aim was to establish whether or not eustress exists and is important in the teaching profession, gender as a key variable was not a focus and was dropped in the qualitative phase upon which this paper is based.

The quantitative findings indicated that the following factors were important in the development of both forms of stress: job self-efficacy, job motivation, satisfaction with professional development, teaching experience and what teachers valued personally or felt impacted by on a personal level. The quantitative analysis used regression techniques and concluded that the aforementioned variables were the best predictors of teachers' self reported answers to experiencing work-place stress (distress and a neutral form of stress which could pertain to positive stress). However, the predictor variables accounted for less than twenty percent of the variance in the measures of stress, indicating that other unexplored variables (within the survey) were important in the development of work place distress or positive stress. Furthermore, the proxy used within the analysis for positive stress was not a direct or accurate measure of positive stress. Finally, the regression models indicated that whereas job motivation was an important predictor for both distress and the neutral form of stress, this was not the case for self-efficacy.

These findings helped to shape the qualitative element of the study. The quantitative approach did

not take a holistic approach to exploring the development of stress and so left many questions unanswered, e.g. what role do individual personality traits play, how important are non-professional stressors in the development of professional stress and why is teaching experience important in the development of stress? These issues were explored further within the qualitative interviews. The interviews were gathered from six secondary schools with which links had been established between February 2009 and May 2011 for a three-year Economic and Social Research Council funded project UPMAP: Understanding Participation rates in post-16 Mathematics And Physics (Reiss et al., 2011). UPMAP explored what factors both in and out of school influence students' choices in mathematics and physics at post-compulsory education. Science and mathematics teachers from six secondary schools and, in some instances, their senior leaders were recruited to be a part of the UPMAP project, primarily to ask them to help set up student interviews. The study on which this paper is based was a separate sub-study to the UPMAP project and therefore the selection of twelve teachers (from these six schools) for interviews was based on opportunistic sampling (they were available and chosen to be interviewed because of their role in access to students for the UPMAP project). The purpose behind the interviews was explained to teachers; all teachers were clear that the stress study was a separate study from UPMAP and that they were under no obligation to take part. All of the interviews were recorded and transcribed; thematic analyses were used to explore issues around eustress and distress. Inter-researcher reliability was assured with Mujtaba iteratively showing and discussing data and emerging themes with Reiss throughout the research process.

This paper is based on the in-depth analysis of the most important themes extracted from the twelve teachers. The five key themes are: trust; self-efficacy, job motivation, social support and reflection. Given the overlap between self-efficacy and job motivation, these two themes are discussed together. The five themes selected as important were those that consistently appeared to be of significance in the narratives of the twelve teachers. We focus on three teachers, selected because they illustrate the most important themes and because they differ with respect to their professional experience, positions of responsibility, gender and age; the messages from their interviews are in line with those of the other nine teachers. In addition, these three teachers had each been teaching for at least seven years (it seems likely that teachers very new to the profession experience distinctive types of stress), had different perceptions about the role of stress and used different coping mechanisms. James (all names are pseudonyms) was also a good contrast (in terms of age and caring responsibilities outside of work) to Elsa and Gurdip (older teachers with no caring responsibilities). The areas explored within the interviews were guided by the issues the twelve interviewees raised as well as ones that emerged from earlier quantitative analyses (Mujtaba, 2012). Themes that were relevant to research on eustress and distress were listed within the interview schedule and, as successive interviews were undertaken, more themes were added. A way of looking for issues around eustress and distress was to split each theme into a dichotomy (see Table 1). Saturation was reached in the production of new themes around positive teacher stress after the sixth interview. Interviews were conducted in a series of blocks: May - July 2009, November 2009 - January 2010, May - July 2010 and March - May 2011.

INSERT TABLE 1 HERE

Throughout the data gathering process, there was an awareness of the impact of the interviewer's motivational, personal and professional influences when undertaking the interviews. Discussions between the two of us about coding and interpretation of the data helped ensure that our conclusions as to what was eustress and what was distress were robust. The study conforms to the Institute of Education's ethical guidelines for research that involves people and schools. Informed consent was obtained from the senior management team of each school who were aware of the voluntary nature of the research. All teachers were guaranteed confidentiality and the right to

withhold any information and withdraw their interview data from the study at any point.

Findings

Pen portraits of the three teachers

James was a newly qualified male mathematics teacher in his thirties working in an inner-city school in London, with a decade of teaching experience working in schools in a country outside of England (but he was required to re-train in England). He stated that he had a good work-life balance, a good personal life (with a wife and toddler who required much of his attention outside of school), and aspirations to go further within his career. He had a high level of self-efficacy which did not flounder even when the quality of his teaching was under question by his head teacher for a sustained period of time. Interviews with other teachers in the school corroborated James' story that the head teacher often bullied teachers, particularly those within the core subject departments (i.e. English, mathematics, science) if she felt that a particular teacher was not performing adequately. James had good relationships with the head of the mathematics department and other teachers throughout the school and sought social support from them during this period of distress. It was concluded from James' narrative that he had elements of eustress within his role (indicative of task engagement and high levels of job motivation) during a period of job distress.

Gurdip, a teacher of science, worked in a rural school with a supportive senior management team and had been in teaching for about thirty years. He was content in his current post and had no aspirations to move to a senior position, which was in contrast to what he had once aimed for. The senior management team of his current school were said by Gurdip to be as interested in the teachers' well-being as in the performance of departments, in contrast to his former school which he maintained was only interested in student attainment. There was a contrast in the way he handled the stresses of the job in the two different school settings, partly due to the supportive nature of the senior management team and partly due to Gurdip having grown as an individual. In his former, failing school, Gurdip was off work with clinical depression for a few months due to the combined effect of a failing marriage and problems at work. After this he went through a period of reflection which led to changes in his personal and professional life. Such changes protected his mental well-being; in future distressing circumstances he had already developed protective coping mechanisms, e.g. seeking social support, maintaining a work-life balance and being aware of his personal limitation. After his recovery Gurdip's narrative indicated that he experienced elements of professional eustress even during periods of distress.

Elsa, a teacher of mathematics, worked in a semi-rural school with a good work-life balance. She was previously (fifteen years prior to the interview) the head of a mathematics department. Starting a family and changing schools resulted in her losing this position and despite working hard throughout her career she never managed to get back to being head of department; this left her feeling undervalued. Elsa felt there was more pressure on mathematics teachers and that they were not supported enough by the senior management team. In contrast to James, her self-efficacy was impacted by the way she felt she was treated and seen by others; she did not seek social support during periods of distress and at times avoided trying to tackle problems. Elsa's narrative indicated that she had very small elements of eustress within her role which was increasingly becoming distressing not because of any particular issue causing distress (as in James's narrative) but because she constantly felt under-valued and de-skilled.

Overview

For some of the twelve interviewees, there were narratives that did not fit as simply pertaining either to positive stress or to distress but were a mixture of the two, notably distressing events that were turned into positive outcomes by teachers adopting relevant coping strategies. Eustress was identified as a positive influence that motivates teachers to aim for challenges in their professional

life, aids personal and professional growth and pushes teachers to make the necessary changes to their environment in order to reap benefits. Positive stress in teachers is indicative of problem-solving actions and creative solutions to areas of their professional lives that require improvement. Distress is characterised by events/stressors that create anxiety, ill-feeling and a negative impact on teachers. Manifestation of the type of stress experienced varied between teachers and fluctuates over time within the same individual.

Not all the teachers were able to recognise eustress. Most teachers claimed that the causes of 'bad stress' at school were government policy, school politics, lack of autonomy and problematic pupils. Some teachers were able to recognise that positive stress functioned in their role as a teacher and, in that sense, an indicator of positive stress was positive affect. Teachers used words to indicate meaningfulness and hope as psychological 'belief' coping mechanisms that they had the will and the way to succeed. Some teachers did acknowledge the role of eustress in their professional lives:

Stress can be invigorating ... I think having a job which is extremely pressured, lots of things to do, difficult decisions to be made, managing difficult people, I think that is a job that is more enjoyable than a job where you are not being stretched and be suffering from bouts of tedium. (Michael, a senior leader at one of the six schools)

Another finding was that teachers of mathematics and science felt that they faced more pressures compared to teachers from other departments. In their interviews, these twelve teachers reported that negative perceptions of many pupils towards their subject as being difficult caused them to feel stressed.

Coding of the twelve interviewees uncovered key themes that are relevant to how stress arises and whether it leads to the development of positive or negative stress. In order to explore the possibility of positive stress and the role it could play, each theme was split into a dichotomy, one end of which will provide evidence for arousing distress and the other for arousing eustress (see Table 1).

The divide between positive stress and distress is not quite clear-cut within all of the themes and in instances where teachers might have been expected to exhibit only distress they sometimes also showed elements of eustress, which indicates not only that eustress is possible but also that indicators of eustress (e.g. high 'current motivation', high 'self-efficacy', positive affect) and the use of appropriate coping strategies can be present during distressing events. This paper discusses five key most associated with the development of eustress.

Trust / mistrust

Holding trusting relationships at work meant that teachers were able to build upon skills and/or rely on social support mechanisms to help them through problematic times. The role of trust in igniting positive or negative affective states was highlighted by Hargreaves (1998). In schools where the ethos focused on human needs and harmony amongst staff, rather than just target setting, and which genuinely sought to aim for collaborative working environments, teachers were enabled to build positively on stress whilst controlling its negative repercussions. It appeared that the relationship that teachers had with those in leadership roles was the one that was most important in evoking distress or eustress, presumably at least partly because those in leadership have the power to find a solution or to exacerbate issues. When leadership were unable to display support, understanding and fairness, teachers were more likely to experience distress within their professional roles with the converse being true for eustress. Trust also surfaced within the interviews of these three teachers in the guise of the teachers being open and honest about their self-perceived vulnerabilities and letting senior management know about why they were unable, for example, to take on additional responsibilities. In some school settings, seeking the help of those in management was fully supported, which helped to alleviate distress and promote eustress.

James had experienced a series of incidents at school which he felt had undermined his professionalism. James' perception of the head teacher and her motives was animated with a series

of labels that signalled mistrust: 'it's part of the head's technique to bring in external people to keep you on your toes'. James said he felt he was "shafted" by the head teacher in particular. There was a particular focus on the performance of the mathematics department because of alleged falling standards. At the time of the interview James decided to leave the school even though his head of mathematics fully believed in him as a colleague:

'I'm looking for a more pleasant work environment to work in' was met with reassurance from the head of maths that 'it was only one person who thinks that [his lack of competency] and it's not everyone else and certainly not anyone in the maths department'.

James' lack of trust in the head teacher's motives aroused distressing emotions in him:

Head was trying to stitch me up ... quite sick of all these observations [James' competency in teaching was being assessed and though he had passed one observation/assessment his head teacher requested he be reassessed] ... [and again a few weeks later when he was re-interviewed] I did feel angry, which changed to partial despair when I thought there was a real possibility I'd lose my job because of politics and other leaders' incompetence.

Though it was also apparent that James had utilised positive social relationships with other members of staff and was able to trust them with his intentions as to how he intended to resolve the situation, which would possibly go against the needs of the head teacher, James (unlike other teachers, for instance Gurdip, discussed below) managed to turn the situation around.

The way teachers appraise a situation lends itself to the kind of coping strategy that they adopt. The twelve teachers exhibited a mix of different types of coping strategies which helped them to regulate distress and produce positive affect. James had appraised his stressful situation as a challenge and thus employed various strategies in order to overcome the perceived issue of the passive bullying style of his head teacher. The re-appraisal of a series of distressing situations as becoming resolvable but challenging – 'I'm a maths teacher in demand I can go elsewhere' – meant that James was able to signal to himself the possibility of mastery over his situation. Our observations of his attitude towards his short-term goals during this stressful time at school indicated that he was also manifesting positive dispositions such as confidence, ambition and eagerness. The problems with his head teacher (or school) spurred him on to apply for other positions outside of the school and having landed a position with more responsibility at another school, he was then able to see a benefit of having gone through a distressing time at school:

I'm 25% financially better off ... and it's a positive outcome career-wise.

He had not undergone any burnout because of the positive way in which he had appraised his situation combined with the fact that he perceived the management of the school as being the main problem, rather than departmental colleagues or himself. This helped protect his self-image and meant that he was able to continue having some stable relationships and rewarding interactions with colleagues whilst undergoing a period of professional distress.

Gurdip spoke of his different kinds of experiences in two very different school settings, where trust in leadership played a vital role in his management or mismanagement of workload issues and, consequently, to his development of distress or eustress. The first time he became distressed he was in his former special measures school – 'special measures' being a label given to schools in England by the schools inspection agency (OFSTED) when it comes to the conclusion that a school is performing below a level deemed to be satisfactory. In this school Gurdip did not trust the management with the fact that he was not coping because the school itself was facing problems of its own; given that he was aiming for deputy headship he chose not to portray his vulnerability. In contrast to this situation, in his current school he was able to vocalise his anxieties about taking on more responsibilities; a trusting collegial environment enabled him to talk about his vulnerabilities. He felt that having a trusting and supportive environment helped prevent a re-occurrence of clinical depression and enabled him to feel comfortable with aiming for challenges that are not 'too far out of my comfort zone'. What Gurdip displays are signals of positive affect as he remains ambitious, is diligent in his job, motivated to seek more challenges and uses the word 'enjoy' with reference to his job. He knows his limits and uses positive stress to aim for challenges that he knows he can meet, thus feeding into his self-efficacy as a teacher and protecting his own

positive view of his professional identity.

For all twelve teachers it appeared that many of the issues to do with trust or mistrust lay with senior management. Elsa gave two very different accounts of how trust played a role in creating positive or negative affect in her current school. In the first incident, she had not been given any credibility nor a chance to explain her side of the story to senior staff, in reference to a complaint made about her from another science teacher, a biologist, because she had asked him to help her son (her son attended the same school at which the colleague taught). Elsa's professionalism was being questioned as she was accused by her son's biology teacher of using her status as a teacher at the school to expect preferential treatment for her son. She was not supported by the head of biology or the deputy head and this left her feeling that she had been treated unjustly. Rather than continue to try and stand firmly by her viewpoint Elsa avoided the confrontation and the challenge that she had initially sought to overcome. In contrast to this situation, in another episode the head teacher did give her credibility and a chance to explain her side of the story when a potentially distressing situation arose and his supportive response eliminated any long-term feelings of distress:

Oh because he just said 'Just leave it, don't worry about' it ... he was so good like that it just made me be able to forget it much more quickly and just put it to bed much quicker.

The other notable difference between Elsa's two experiences of clashes with senior staff is that in the first instance the challenging period lasted a few months whereas the second situation was dealt with almost immediately, indicating, at least in this particular case, that short-term stress may not produce long-term negative affect whereas long-term stress possibly can.

Self-efficacy and motivation / low self-efficacy and lack of motivation

It became clear from the interviews of the twelve teachers' professional lives, both in terms of historical stressful events and current stressful situations, that those teachers who had higher levels of self-efficacy were more resistant to distress and were able to work under stressful conditions and maintain or believe that they maintained a sense of professional accomplishment. James had a high sense of self-efficacy as a teacher and nothing that happened at school shifted his belief in himself as a good teacher; rather, James was very clear about not attributing any blame to himself with regards to any purported problems with the quality of his teaching: 'how can she [the head teacher] be questioning my capability when I've just proven it?'. James consciously acknowledged that he was different from the other teachers who were looked upon negatively by the senior management team through his re-appraisal of the negative perceptions of management as not being forward thinking which reinforced his high levels of self-efficacy:

they considered my teaching style to be unconventional and I think they look at me as a bit of a maverick ... I took that as a compliment but I don't think that it was meant that way ... I don't want to fit the conventional role of a teacher. I want to try things that are more interesting, exciting and fun but there doesn't seem to be room for that here.

James also developed coping strategies to deal with students who would not engage with his teaching which we feel also helped protect him from the potentially damaging remarks from the senior management team:

There are certain things that are beyond your ability to overcome ... the one thing you can't do is instil the motivation and desire to learn in pupils, so when you get a student who has no interest in learning maths ... doesn't want to be there, they don't like school ... there isn't a great deal you can do about it ... one strategy of coping with it is to lower your own expectations and realise that I'm not going to reach every student ... end of the day you aren't doing surgery, no one is dying and if you fail to teach one student..

During periods of distress teachers did question their belonging to their schools; most teachers within the study did not express a wish to change careers – 'the job's not without its rewards' (James) – but a number did move schools. Teachers early in their career history were more likely to feel unsure of themselves as teachers and, though they were able to see the external cause

of their problems, lacked the belief in themselves to tackle the situation, whereas teachers with more experience were less likely to question their own skill sets.

It appears that the use of coping strategies that protects teachers from the harm of distress and promotes eustress is regulated by personality dispositions that harness optimism and are goal-focused. Being able to overcome distressing situations with positive outcomes has helped to fuel in some teachers the motivation to seek further professional growth. It appears that those teachers who hold negative feelings and behaviours in times of stressful situations can suffer from long-term effects of distress that alter their perceptions about themselves. Elsa is a prime example of this (discussed below). In contrast, those teachers who re-appraise historic or current situations in a positive light protect their own self-image and self-efficacy as James had done.

Elsa, a very good mathematics teacher, was at the time of her interview not only deputy head of mathematics but also leading on various initiatives; almost immediately in the interview she said 'I'm just a classroom teacher, just an ordinary classroom teacher' and then went on to say 'there's nothing much about me, I'm not special, just ordinary ...'. Later on in the interview it was quite apparent that Elsa had been left with a slightly damaged self-efficacy because she had been unable to get back into a more senior position after having had her son, a point which she emphasised.

Social support / social isolation

James recounted how he focused on social resources such as support from other colleagues, in particular the head of mathematics and the union. He treated the situation as challenging but manageable with the use of social support and positive reappraisal of the situation. With the help of his union, James had managed to remove a competency complaint against him and was able to remain in his post if he wanted to. The situation had spurred James to use several techniques to overcome the problems at work including applying for posts outside of the school. James' motive for moving was possibly to protect his self-image, which would make sense because for human beings to feel psychologically secure, they need to harness relationships that promote continuity and reliability (Giddens, 1990). A feeling of security, support and trust would protect against the long-term effects of further distressing events, particularly as James prophesied that the school he was to move to would have extremely challenging pupils.

Not all teachers were able to recognise that they required social support during times of distress and in such instances the situation for teachers just became worse. Gurdip did not actively seek social support prior to his first breakdown but rather had hoped that it would be forthcoming; at the time he felt resentful for not being supported both personally and professionally, though retrospectively he was able to see why such support were not forthcoming. Some of his colleagues at the time were also suffering from distress and/or opting for early retirements. Agendas set by the senior management team led to an increase in workload where Gurdip, like his other colleagues, had to prepare every lesson and show the paperwork to the immediate line manager both before and after the school inspection:

If anything causes stress in schools that does, it damaged a lot of people ... the stresses that were put on teachers.

Though Gurdip should have sought support, he isolated himself both professionally and personally, avoiding tackling the issues that were making him ill. Gurdip's case history is rather different from the other teachers in that he was able to vocalise and identify that the way he dealt with distressing events were distinctive both before and after the breakdown. There were two further instances where he found himself in professionally distressing situations, but having learnt from the impact of isolating himself, Gurdip sought support from senior management, which led to positive outcomes. He made a distinction between himself as a less experienced teacher and his current situation. He felt he is now better able to manage work-life balance, prioritise what is important and not let teaching demands take over his life, a sentiment which was also expressed by other teachers, particularly those who had already undergone distressing episodes at school. For example, James

remarked, ‘when someone asks you to do something as soon as possible, you do it as soon as you possibly can, even if it is a month later’.

Reflection / lack of reflection

Critical reflection on professional practice serves a dual role in helping teachers to improve their professional practice and improving how they personally feel about their roles, aiding a sense of control. Within the growing body of research in this area it is also recognised that critical reflection can be difficult for teachers to engage with in a meaningful way (Attard & Armour, 2006; Luttenberg & Bergen, 2008). Within this study the presence or absence of reflection was related to the type of stress that developed within teachers. Reflection by teachers of their practice and the professional circumstances in which they found themselves was a sign of positive stress via the emergence of positive affective states – in some teachers there were instances where positive outcomes arose after a period of time had elapsed even if the event that caused the distress did not entail positive affect during those periods. James was able to reflect on his role as a teacher, his beliefs, the way he engaged with pupils and the application of his philosophical beliefs to the conduct of his professional life:

In the philosophy club I run after school we were discussing the meaning of life and I said one of my philosophies on the meaning of life was if you don’t like something then change, if you are not happy where you are, move; afterwards I got thinking and thought I should practise what I preach and change jobs.

There did not appear to be any long-term physical, emotional or professional damage to James even though he had endured continued distressing and challenging situations for a period of six months with his head teacher. It appears that this was because he utilised reflection to create positive affect, further motivated himself in his role and created further rewarding professional goals for himself.

For Gurdip, reflection played a key role in positive affect and the prevention of further chronic illness once he applied reflection to his working life. The earlier lack of reflection in Gurdip’s professional life had led him to a breakdown. In Gurdip’s situation the reflective state came about after his first breakdown; reflection served a role in preventing further breakdowns and enhancing his work-life balance: ‘Things were more enjoyable ... and I rediscovered my job of teaching’.

The breakdown helped Gurdip realise that all he wanted professionally was to work in the classroom and not go on to a senior management role. He realised that ‘he didn’t want it and didn’t need it [senior role] ... and since that time things have been an awful lot better for me’.

Gurdip made a link between being able to reflect and his burnout:

Sometimes in teaching I think people feel they do not have time to do that [reflect] ... I don’t think we have enough time to be able to reflect ...

Gurdip’s reflective attitude and former distressing situations were later seen as positive because he re-appraised the situation in a positive way, which not only changed the way in which he remembered historical events but also paved the way for future distressing episodes to be rapidly re-appraised from more positive angles. The positive benefits from having gone through a mental breakdown also extend to his personal life and his re-appraisal of that part of history indicates that he sees the breakdown in a positive light:

So when I say it was a good and a bad thing this breakdown I can be very positive looking back and thinking in a sense it needed to happen to enable me to think through what I needed to do with my life to make the positive changes in my life to make it manageable and enjoyable ... It has helped me get a better work-life balance ... it took the breakdown and turmoil of all that to reassess where my life was going.

It appears, from the accounts of both Gurdip and James, that the use of re-appraisal of a situation as possibly positive gives rise to the use of coping strategies that in turn give rise to positive affect via the process of eustress. Eustress appears to be the precursor to personal growth, professional growth and new coping skills by teachers in stressful situations, giving rise to both short-term and long-

term positive gains.

Discussion

Collectively, the analysis of the twelve interviewees, with additional examples from the three chosen interviewees, demonstrate that coping strategies, perceptions of stress and actively tackling stressful circumstances play an important role in the development of eustress or distress. These three key issues are discussed, followed by consideration of the different forms of stress that were demonstrated by teachers.

The role of coping styles in experiencing stress

Analysis of the circumstances of the twelve interviewees raised some important points about coping mechanisms and the development of negative and/or positive stress. The type of coping style adopted in order to overcome distress was influenced by teachers' personalities. It was also influenced by their social support and other resources available at the time, so it was not always the case that the same individual would adopt the same type of coping style. Coping mechanisms were used to help alleviate distressful circumstances or ones that had the potential to produce long-term effects of distress; these twelve teachers displayed a mixture of emotions, both positive and negative ones. Coping styles played a key role in managing the issues creating the distress and in producing positive outcomes. Reflection on distressful events can lead to the adoption of coping styles for future distressful events that can produce positive affect and avoid the effects of long-term mental and physical ill health. Acceptance of distressful events as learning experiences helped some of the teachers grow both as people and as teachers. It appears that for some teachers positive stress and the emotions it gives rise to can occur at the same time and in relation to the same situation as negative stress and negative emotions.

The role of individual perceptions in experiencing stress

There was a conscious recognition by some teachers that positive stress existed when teachers saw the situations as challenging and capable of being overcome as opposed to challenging and incapable of alleviation. In the former situations teachers were able to use stress in a positive way as it enabled them or signalled to them that the possible mastery of a situation would enhance their skills or professional standing. Such situations were characterised by feelings such as eagerness, confidence and pride. Situations that were seen as challenging and incapable of being overcome were distressing.

The role of active agency in experiencing stress

Not remaining within a distressful situation was a coping style adopted in situations where there appeared to be no satisfactory resolution within a situation. The adoption of avoidance in some instances led to positive affect and in some instances to negative affect. Avoidance of a distressful situation manifested itself in two ways: active agency – by seeking an alternative path or method to bring about a satisfactory alternative – and passive avoidance – by not seeking alternative ways of overcoming the problem. The determinant of the kind of affect that arose was related to the kind of active or passive agency strategy adopted.

Different forms of teacher stress

Teachers' manifestation of stress varies and is relative, in the sense that in the same school contexts and/or within the life course of an individual teacher, manifestations of stress or perceptions of it

will vary from person to person. Events that may have induced distress in one set of circumstances may lead to positive affect and positive stress in another set of circumstances. Just as people's emotions vary over their life course, so do perceptions of what they can cope with and what is distressing or manageable. This highlights how other factors, such as personal circumstances, are important in the type and manifestation of stress. For example, from the narratives of these three teachers it was evident that they felt they had additional pressures placed on them because they belonged to core subject departments (i.e. mathematics and science).

Research within other disciplines has established there is value in distinguishing between different forms of stress (Beehr et al., 2000; Cavanaugh et al., 2000) and that, depending on the way a situation is appraised by an individual, a stressful situation can produce positive outcomes (Lepine et al., 2004). Lepine et al.'s study asserted that if a stressor is perceived as changeable and potentially positive, which they called 'challenge stress', individuals are likely to apply active behavioural problem-solving coping methods; however, if a situation is seen as negative, stable and unchangeable, which they termed 'hindrance stress', individuals will apply a cognitive style of coping, e.g. by showing withdrawal symptoms. Our findings also find some support for the role of the use of positive perceptions of stressors leading to less distress and more positive outcomes; when some teachers experienced a stressful situation as changeable with the outcomes being potentially positive they used motivation to achieve mastery over the situation(s).

Recent research into the positive impact of negative emotions indicates the important role that conflict, anxiety and resistance can play in helping students become autonomous learners (Kannan & Miller, 2009). In Kannan and Miller's research, changes in students' emotional states took place concomitantly with particular cognitive and behavioural changes that led to mastery of course content – comparable to the findings in this paper concerning teachers who underwent cognitive and behavioural changes in order to overcome problems within their professional lives. Furthermore, research on the negative emotions associated with stress has found that those who channel their anger within the workplace (productively) are more likely to be satisfied in their jobs than those who suppress their emotions (Tafra & Kassinove, 2009). Similarly, in this paper teachers who had learnt to deal with their negative emotions in a safe and productive way were able to benefit from resolution of issues and/or professional satisfaction in other ways.

Conclusion

Therapeutic approaches, possibly based on the underlying principles of positive psychology (Fredrickson, 2003), could be used within the teaching profession. The perceptions of stressors being distressing or positively challenging vary amongst teachers because of their underlying personalities and their personal and professional histories, making it quite difficult to tackle teacher stress in a uniform way. Preventative therapies used as buffers to protect teachers from developing excessive distress by promoting feelings of wellbeing could build on the positive traits of teachers, reinforcing positive work experiences and building optimism in the workplace. Such preventative therapies might be introduced in teacher training courses, supplemented by school professionals building upon such traits, tailoring approaches to their specific contexts with their members of staff.

Research on perfectionism amongst teachers indicates that some of those who have perfectionist tendencies (those who use 'achievement strivings') use their perfectionist tendencies in a positive way and thus are driven to achieve goals and find the motivation to persevere in the face of adversity and obstacles via the use of adaptive coping strategies (Stoeber & Rennert, 2008). This line of work fits with the notion of teachers experiencing eustress within their roles. The same research identified perfectionist teachers who had 'achievement concerns'; these types of perfectionists use maladaptive coping strategies (e.g. often procrastinate, have low productivity and are more likely to use self-deprecation) in the face of adversity, in line with situations being experienced as distressing. Further research that differentiates between different coping styles and explores how this is related to eustress and distress is much needed.

The interviews indicated that whilst some teachers displayed eustress, others were clearly distressed which was indicative of their negative emotions; a third group of teachers did not show clear cut signs of eustress or distress but exhibited both negative and positive affect when faced with stressors. These differences seem partly to be due to variation in the circumstances that individuals experience but can perhaps also partly be explained by differences between individuals in the degree to which stress manifests itself as eustress or distress, the latter resulting when the stressor has a deep impact and/or has continued for a long period of time, when teachers are then unable to cope as well as they had previously. This would explain why some teachers who experience stress, when they use the right coping mechanisms, have the right professional and personal support and have the right frame of mind (seeing a stressor as capable of being overcome) can produce positive affect by using stress in a positive healthy way and so avoid becoming distressed. The divide between distress and eustress was not always quite clear within the themes and on occasions where teachers might have exhibited only distress they sometimes also showed signs of eustress; such findings are consistent with our theory that teachers can experience eustress in extremely challenging circumstances but also experience emotions associated with distress. This point, though, does not negate the fundamental finding, namely that the qualitative data reported in this paper support the notion that eustress exists for teachers and can be related to their personal characteristics, professional goals and social circumstances. Future research ought to investigate additional measures of teachers' underlying personality characteristics – we only looked at self-efficacy in depth – to see how these relate to the development of resilience, teachers' professional identity and eustress. Considerably more work is required on the psychological factors that influence teachers' commitment and intentions to leave the profession. Such personality characteristics / psychological measures might include self-determination, which measures how much teachers feel they can influence their professional lives, and measures of optimism and hope – areas that have been researched in non-teacher populations by positive psychologists and found useful in the prevention of depression amongst.

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