ORIGINAL PAPER

Using a cognitive framework with nurses to manage stress

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Abstract

Nursing can be a stressful occupation with many nurses struggling to cope with stress on a day-to-day basis. Considerable evidence suggests that positive coping strategies can be an effective part of stress management education programs. This article describes the theoretical rationale for a cognitive framework for stress management that was developed as part of a well-being educational program for cancer nurses. This framework included an associated mnemonic (www.pst) to assist in the recall and utilization of positive coping strategies. The stress management framework was intended to increase nurses' perceptions of personal control which is central to stress management. The academic coping literature is complex, jargon laden and often conceptually abstract, and may not easily be understood by a nonacademic audience. The cognitive framework described here is an evidence-based, user-friendly tool that could be used and evaluated by counsellors, educators, and researchers in different settings.

KEYWORDS
control (psychology), coping, mental health education, nursing, stress management, well-being

1 | BACKGROUND

Considerable evidence indicates that cancer nursing is a stressful occupation.[1–3] A systematic review of stress in Australian nurses suggested that the development of educational programs to increase the coping ability of nurses would be beneficial.[4] Education on the use of positive coping strategies is essential for anyone who works in challenging and demanding occupations. However, the literature relating to stress and coping is both extensive and conceptually complex. Although this complexity is necessary to develop further understanding and nuance in this area, it may not be optimal in developing and delivering practical coping strategies to a nonacademic audience.

In this article, we describe the theoretical rationale that underpins a cognitive framework for stress management. This framework was developed and used within a well-being education program for cancer nurses in Australia. The framework was presented in a pragmatic and easily understood format, that helped to facilitate

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recall and utilization of positive coping strategies. The creation of an easily remembered mnemonic and real-life examples of work-related stress likely to be experienced by cancer nurses, assisted with the learning and utilization of the framework.

1.1 | What is stress?

Stress is a commonly used word with predominantly negative connotations; however, stress is an important feature which has an evolutionary basis that aids an organism's survival.[5] When an organism is faced with a perceived threat ('stressor'), a complex sequence of physiological responses is initiated. The 'general adaptation syndrome',[6] is commonly known in humans as the 'stress response' or the 'flight or fight response'; a term first used by Cannon.[7] Activation of the sympathetic nervous system prepares the body for action (either to fight or flight). The adrenal glands receive distress messages from the hypothalamus in the brain in the form of corticotropin-releasing hormone, and in response to this the adrenal medulla releases adrenalin and cortisol. These hormones initiate complex physiological changes to ensure that the body is in the best possible condition to manage the stressor. Changes include raised heart rate and blood pressure, which increases the oxygen transfer around the body, providing quick energy resources to fuel muscles and sharpen senses. When the stress response is activated, unessential activities such as digestion are stopped, saliva dries up, and air passages to the lungs expand.[8] The stress response is an evolutionary adaptation to give a selective advantage to the organism.[9]

1.2 | Effects of maladaptive stress

The stress response is adaptive for an immediate threat, but potentially maladaptive for longer term stressors. For early humans, who were predominantly hunter-gathers, the stress response would have been very important for survival, such as being faced with an immediate threat of a wild animal about to attack. However, it could be argued that in today's complex society, stressors are less likely to be an immediate threat to survival. Numerous multifaceted stressors are often experienced over extended periods. Stressors differ in severity from micro stressors, which refer to everyday challenges such as relationship issues and finances; to major negative life events, such as a death in the family, being retrenched from your job, chronic illness and so forth.[10] Micro stressors are generally psychological threats, rather than immediate physical threats. However, the human body does not discriminate between psychological and physical threat, and so the stress response is activated regardless. Thus, a person may find that they have inappropriate prolonged activation of the stress response.

It is now recognized in the International Classification of Diseases (ICD-11), that prolonged stress can lead, or contribute, towards many mental, behavioural or neurodevelopmental disorders.[11] Consequently, if there is inappropriate prolonged activation of the stress response, extensive and unwanted physiological and psychological health issues may occur. These can include high blood pressure, cardiovascular disease, anxiety, depression, and sleep disturbances among others.[12–15] A comprehensive integrative review of workplace stress and resilience in the Australian nursing workforce identified the impact and outcomes of stress as being burnout, psychological distress, as well as depression and anxiety.[16] A systematic review of the costs of work-related stress concluded that the costs on society were considerable.[17]

1.3 | Stress management and the importance of personal control

Lazarus and Folkman[18], p.170 argued 'that to cope with a situation is to attempt to control it whether by altering the environment, changing the meaning of the situation, and/or managing one's emotions and behaviours'. Persons who experience a prolonged stress response, are likely to experience a lack of perceived control over their situation. Feeling helpless, that nothing you do will make a difference when experiencing stress, has been extensively researched. Learned helplessness theory[19] contends that a perceived sense of control is central to being able to cope effectively with prolonged aversive stimuli (stress). In experiments with animals it was initially found that if control was absent, the animal learnt that whatever they did made no difference, and thus gave up doing anything to escape the adversity. This held even for situations where there were opportunities to escape, but the animals seemed unable to take these opportunities. Seligman and Maier[20] illustrated this in an experiment where a previously yoked dog, that was unable to avoid shock, was placed in a situation that allowed escape. However, even though there was an opportunity to escape the dog was helpless and did not escape. This contrasts with a dog that had previously been able to escape and when placed in the new situation was also able to escape. The conclusion at the time was that the helpless dog felt that nothing would make a difference, but the escape dog had learned that there may be an option to escape. Thus, it is not just actual control, but the perception of control which is also important.

More recently Maier and Seligman[21] reappraised their Learned helplessness theory using research developments in neuroscience, concluding that the direction of causality in their original theory was incorrect. They proposed that it is not that the organism learns passivity/helplessness from a lack of control; it is that passivity is the unlearned default response and that the organism needs to learn control. This new understanding has important implications for future education and therapy. Instead of experiencing a lack of control leading to learned helplessness, which is a passive response, a perceived lack of control may be prevented by learning strategies to increase the perception of personal control at the time of presentation of the stressor(s). Additionally, it may be possible that a person who is experiencing longer lasting perceptions of a lack of control, may recognize the state and then initiate positive coping strategies.

In essence this would mean moving from a passive to an active coping pathway. The cognitive framework for the management of stress described in this paper was designed to increase the perception of personal control for cancer nurses, by providing positive coping options for stress management.

1.4 | Types of coping

Coping is an extremely broad and complex area of study that 'a bewildering number of distinctions (within coping) have been made' (Carver & Connor-Smith[22] p. 685). It has been noted that 400 ways of coping have been identified, and these are subsumed under broader categories such as problem/emotion focused; approach/avoidance; cognitive/behavioural.[23] Confusingly, these broader categories are often conceptually very similar, making the understanding of an application of coping approaches more difficult. Moreover, there are many theoretical and conceptual approaches, and no common consensus in the literature, on how coping approaches should be precisely described or categorized.[24] Although a thorough review of coping is beyond the scope of this article, we will attempt to provide a conceptually consistent and pragmatic explanatory model, to facilitate understanding, accessibility and internalization of the key coping approaches.

It has been argued that coping strategies used to manage stress can be either adaptive or maladaptive. Further, that adaptive strategies are viewed as positive effective coping and the most successful for managing stress. These strategies are cognitive and conscious attempts to manage stressors. Conversely, maladaptive strategies are generally reactive, negative and ineffective coping that tend to increase the associated distress for the person and for those around them.[8]

In their seminal work on stress and coping Lazarus and Folkman[18] describe their transactional model of stress. In this model, they suggested that there were two broad coping categories: problem-focussed and emotion-focussed. Problem-focused coping attempts to identify the source of the stress, evaluate it, and where possible eliminate it. The logic here is that if you remove the source of the stress, then there will no longer be need for a stress response. For example, if a student is experiencing stress due to an upcoming assignment, that they have done little work for, they could identify this as a stressor and then work towards the requirements of the assignment, thus eliminating the stressor (problem-solving). However, not all stressors are problems that can be, or should be, attempted to be solved, as some may not be within a person's control. Nevertheless, for those stressors that can, problem-solving coping has been shown to be effective in reducing stress.[25] There are many reviews of stress and coping that support the efficacy of the problem-solving approach.[26–29] Further, it has been argued that successful problem-focused coping is associated with feelings of control and mastery.[30]

According to Lazarus and Folkman,[18] emotion-focussed coping seeks to manage the experience of the unpleasant emotions, rather than making changes to the source of the stress. Emotion-focussed coping can be both adaptive and maladaptive. The way this is classified is that all attempts to reduce the negative emotions associated with stress are conflated under this one category, thus limiting the utility of this model. Maladaptive emotion-focussed strategies may help to temporarily alleviate stressful feelings but are likely to result in more stress later. For example, the student who has an assignment to do could choose to avoid the problem and use strategies such as self-medication with alcohol, drugs or food, or use of distracting activities to prevent thoughts about the assignment. These strategies are likely to increase the stress response when the assignment is due, and no work has been undertaken.

Thus, to make a distinction between positive cognitive emotion-focused coping (adaptive) and negative reactive emotion-focused coping (maladaptive), we propose that coping needs to be presented in a conceptually different, but arguably more pragmatic and easily understood way as two subcategories:

1. Positive-cognitive coping (problem-focussed & some positive emotion-focussed)
2. Negative-reactive coping (negative emotion-focussed)

We suggest that some of the proactive cognitive emotion-focussed coping suggested by Lazarus and Folkman,[18] could be referred to as 'Positive-cognitive coping'. These strategies would include positively reappraising the stressor, and self-care activities that may reduce the experience of negative emotions. Whereas, other emotion-focussed strategies that are negative and reactive such as anger, self-medication, and avoidance should be referred to as 'Negative-reactive coping'. This is consistent with the Coping Circumplex model of coping, which integrates numerous coping distinctions, and assumes that individuals need to cope with stress by problem-solving and by regulating their emotions.[24]

To help further elucidate a more complete conceptualization of positive and negative coping strategies, we have modified 'Gaining Control' theory,[31] which illustrated how parents of children with attention deficit hyperactivity disorder (AD/HD), used a process when attempting to manage the stressors presented by their children's challenging behaviours. In that study, it was found that parents of children with AD/HD experienced less distress when they took a 'cognitive pathway' in response to a stressor, but conversely experienced significant distress when they reacted to the stressor using an 'emotional pathway'. Figure 1 illustrates an adaptation of the Gaining Control model, in which the process of adaptive (reduces stress) or maladaptive (increases stress) coping strategies that a person may take in response to the presentation of an immediate or on-going cognitive stressor, are outlined.

As previously discussed, the stress response is entirely appropriate for an immediate physical life-threatening threat, however, for micro, ongoing everyday psychological challenges, a positive-cognitive coping approach is recommended. The adapted Gaining Control model demonstrates that on presentation of the stressor the person evaluates whether they have the resources to meet the demands of the stressor. If they think they do have the resources
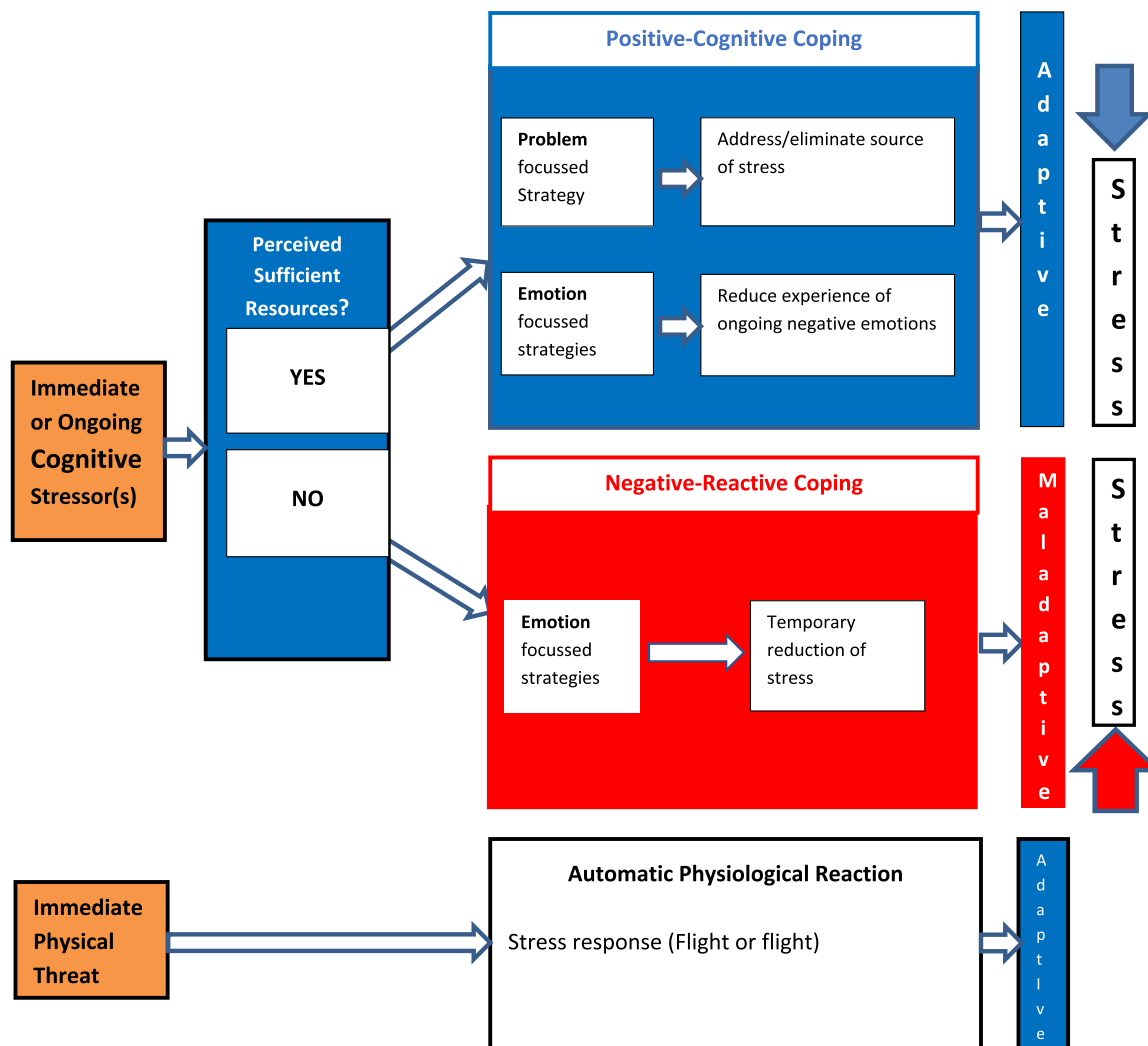
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FIGURE 1 Adaptation of the Gaining Control model

they take the positive-cognitive coping response pathway, which evaluates the stressor and applies either single or multiple cognitive positive coping strategies to either eliminate or manage the stressor. Resources are varied and can be internal or external and include, but are not limited to, knowledge, personality type, social support, physical and environmental resources. Whilst it is not always possible to eliminate the source of the stress, it is generally possible to reduce the experience of the negative emotions associated with the stressor (s). This process is adaptive, as the person is adjusting to the demands of the stressor and reducing their stress.

Conversely, if the person has insufficient resources and they take a negative-reactive coping pathway, that does not adjust/adapt to the demands of the stressor. The person simply tries to suppress the experience of the negative emotions by maladaptive and nonsustainable means. This may temporarily relieve the experience of some negative emotions but is likely to lead to increases in stress and negative emotions in the medium/long-term.

Thus, we would argue that being able to communicate effective, easily accessible, adaptive and positive coping strategies, based on

key theories/models and concepts from the stress, coping, and related literature, could potentially be of great benefit to nurses, as well as other similar cohorts working in stressful environments. However, it is one thing to inform the desired target audience of these positive coping strategies, it is another to ensure that they are recalled and ultimately utilized. To aid in the recall and utilization of these positive and adaptive coping strategies we developed a cognitive framework, with an associated mnemonic.

1.5 | A cognitive framework for stress management

Cognitive frameworks (or schemata) are abstract mental plans that guide action and allow the organization of information.[32] The proposed cognitive framework for stress management helps the person acquire, organize and utilize a set of positive coping resources and skills. In this respect, the cognitive framework is acting as 'scaffolding', which refers to the support offered by an educator to

bridge the gap from where the person is currently, in terms of understanding, to a higher level, that they could not achieve without this support.[33] In this context it is scaffolding which assists the person to move from having broad unstructured ideas of stress and how to cope with it, to an organized understanding of how to examine their stress and being able to develop for themselves an effective coping plan.

The proposed cognitive framework for managing stress assists in accurately identifying the stressors (causes/problems), and then making a conscious plan to manage this using positive-cognitive coping strategies. These strategies could include a single, or combination of strategies such as problem solving, reappraisal of the stressor, and self-care behaviours. Adoption of these positive-cognitive coping strategies will likely minimize the negative effects of long-term activation of the stress response, benefitting a person's overall health and psychological well-being.

However, a cognitive framework only has utility if it can be readily recalled. Mnemonics are cognitive strategies for improving memory and recall and may assist in the recall of a cognitive framework. There are numerous types of mnemonics including, acrostic sentences, acronyms, method of loci, rhymes, keyword and peg words.[34] The mnemonic used in the cancer nurse education program, www.pst, is an acronym. This mnemonic takes the first letter of each stage of the model, to prompt recall of the associated stage. In addition, www.pst looked like an internet website, and so it was reasoned that this pattern would further assist nurses to recall the complete cognitive framework, which aimed to optimize their management of stress. There is considerable evidence to suggest that mnemonics are effective tools to aid in memory recall in many settings. For example, positive results have been shown with students who have learning and behaviour problems[35]; elementary accounting[36]; and educational settings.[37] In a study examining 1487 tertiary students use of mnemonics, it was found that the two most useful characteristics, as reported by the students, were that it should be brief and well connected to the subject matter.[38] We would argue that our mnemonic, www.pst would fit those criteria and assist in the recall of the cognitive framework to manage stress. The framework would help the person construct their own positive coping approach by analyzing the current situation and stressors, and the relative contribution of the resources that they have available to either control the stressors, and/or moderate the impact of the stressors.

Research indicates that threat stimuli is automatically prioritized by the amygdala (part of limbic system that processes fear, amongst other emotions), as this would have been an evolutionary advantage in dealing quickly with immediate physical threats with the stress response. However, as these processes are relatively automatic, they may be triggered by emotional cues that are not necessarily an immediate physical threat. Further, research has also shown that higher cortical processes, that is, thinking (higher cortical/neocortex) as opposed to reacting (amygdala/limbic), can influence the degree of threat perception.[39] By using a cognitive framework for stress management, we anticipate that the initial negative, automatic and emotional reaction/response to the stressor/threat (amygdala), may be moderated by promoting the activation of higher cortical parts of the brain, such as the neocortex, to the stress/threat cues. This would then influence (reduce) the degree of threat perception and thus help facilitate the deployment of a greater number of positive coping strategies. Use of a cognitive framework promotes the activation of higher order parts of the brain such as the neocortex, to essentially facilitate a cognitive process to try and gain some control over the stressor(s).

It is possible that use of a cognitive framework to manage stress may help retrain neural pathways from emotional to cognitive by enhancing 'psychological flexibility'. This refers to the ability to recognize and adapt to situational demands, adjusting mindset and behavioural response when existing mindsets or behavioural repertoires compromise functioning.[40] A lack of psychological flexibility has been related to depression and anxiety disorders,[40] and has been associated with increases in stress.[41] The cognitive framework outlined here, provides structure and options when coping with stressors and may help promote psychological flexibility and more adaptive behaviour.

1.6 | Implementation of the www.pst stress management framework

The www.pst stress management framework, developed to assist cancer nurses to manage stress, was intended to increase personal control by using positive-cognitive coping strategies. In the well-being program cancer nurses were taught to be more cognitive of the stress response, and the mnemonic www.pst was provided to assist in the recall and utilization of positive-cognitive coping strategies. The framework is nonprescriptive and helps facilitate psychological flexibility. It was designed to help a person assess, and respond to, stressors in a way that was active, cognitive, and flexible. This approach allowed the person to more readily adapt to the fluctuating situational and contextual demands of multiple stressors. Real-life cancer nursing scenarios were used within the program and the www.pst stress management framework was applied to these scenarios, assisting the nurses to subsequently apply the framework in the clinical setting.

2 | COMPONENTS OF THE WWW.PST STRESS MANAGEMENT FRAMEWORK

This section provides details of the components of the www.pst stress management framework. Figure 2 provides a visual pathway for using the framework. When feelings of stress are observed, the person first learns to 'Stop, think, evaluate', followed by asking themselves three key questions, 'What is the problem?', 'What are my resources?', and 'What can I do?'. This approach is based on the Lazarus and Folkman's transactional model of stress[18] and the modified Gaining Control Theory.[31] Each presentation of a stressor goes through two appraisal processes (although the processes are interdependent on each other). The primary appraisal determines whether the stressor is irrelevant, benign positive or a threat. If the
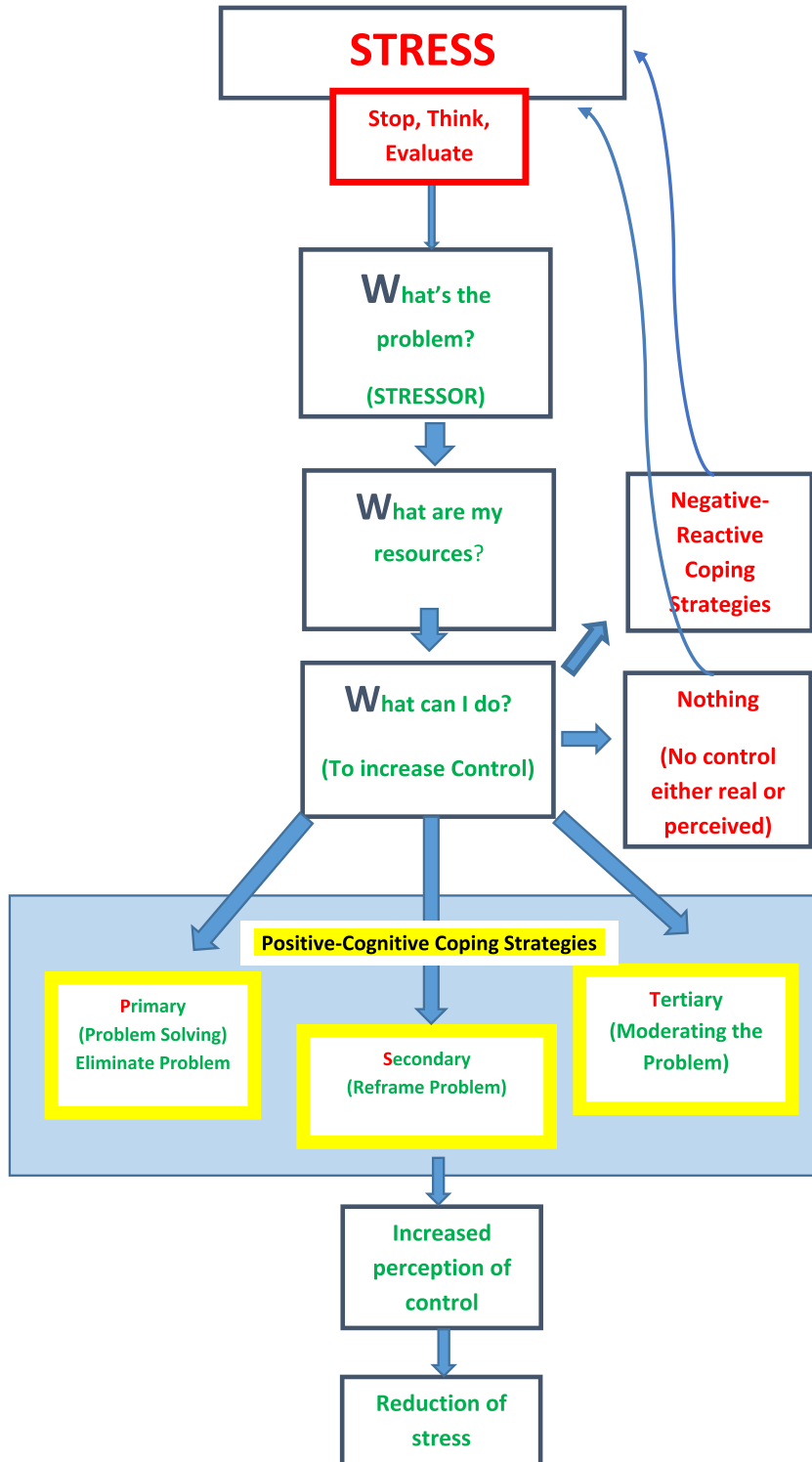
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STRESS

Stop, Think, Evaluate

What's the problem? (STRESSOR)

What are my resources?

Negative-Reactive Coping Strategies

What can I do? (To increase Control)

Nothing (No control either real or perceived)

Positive-Cognitive Coping Strategies

Primary (Problem Solving) Eliminate Problem

Secondary (Reframe Problem)

Tertiary (Moderating the Problem)

Increased perception of control

Reduction of stress

stressor is assessed as a relevant threat, then the secondary appraisal evaluates how much control the person has over the stressor.

2.1 | What is the problem?

When stress is experienced, persons are encouraged to pause and identify the cause of the stress in a cognitive way, as opposed to reacting in an emotional way, this then allows the person access to a wider range of coping possibilities. To assist with the identification of the stressor, or problem, four subquestions are asked: What is causing you to feel stressed? Is there more than one problem? Are there any subconscious reactions? (i.e., has the correct problem been identified or is the problem being manifested by reactionary behaviour?) Is this a real threat or not?

The example of a 'Tiger in the room' was used in the nursing education program, to illustrate the use of this question and to relate

back to the stress response in early humans. When the reaction to psychological stresses is compared to a Tiger in the room, a different perspective of the problem is created, and the severity of the problem can be more accurately assessed. Although psychological problems may be distressing, in the context of a Tiger in the room, they are rarely life threatening. Therefore, a range of positive-cognitive coping strategies can be used, rather than activation of the basic stress response of either fighting or running away from the Tiger (fight or flight).

2.2 | What are my resources?

After identifying the problem/s causing the stress, if the person takes a cognitive approach, then the next step is to assess what resources they have available to manage the stressor. This awareness of personal resources is a key component of coping and known as 'self-efficacy'. This is the belief that you have the resources to meet the demands of the challenge or task that you are facing,[42] 'If people believe they can exercise control over the occurrence of events that can be injurious, they do not fear them'[43], p.465. Conversely, if a person were to take an emotional reactive approach, which might be where the stress response is not understood or considered and just reacted to, then options for managing that problem/s, are greatly diminished and are more likely to be associated with poorer outcomes.

Resources can be internal, such as personality characteristics, attribution bias (tendency to view things in a positive or negative way), previous experience, knowledge, and ability; or external resources such as social, physical and environmental. An example of social external resources for nurses would be the healthcare team, and the potential to call on the team for assistance.

2.3 | What can I do?

After identifying the problem/s and assessing available resources, by using the www.pst mnemonic, a person can then decide on the best course of personal action (or multiple course of action), to either eliminate the problem or ameliorate the effects of the stress.

When deciding what can be done, nurses in the workshop were asked to consider the things that were within their control and the things that were not. This was an important step in determining the most appropriate choice of positive-cognitive coping strategies. For example, aspects that a person would not have control over included the weather and traffic congestion. Whereas, aspects that a person could have control over included their personal attitude, preparation for events, and self-care. By determining areas of control, clarity for deciding the course of action is enhanced. Circles of control and influence were first outlined in 1989 in the seminal book by Covey[44] who identified three categories of personal control. First, 'direct control' which is our greatest source of control and concerns positive personal habits. Second, 'indirect control' which involves using an expanded repertoire of methods to interact positively with others

and increase personal influence. Third, 'no control' where we genuinely have no personal control and actively recognize this and 'accept these problems and learn to live with them, even though we don't like them' (p. 93).

2.4 | Positive-cognitive coping strategies

Within the well-being education program positive coping strategies which were categorized as **P**rimary, **S**econdary, and **T**ertiary strategies. Primary strategies were attempts to remove or reduce the problem/s causing the stress, and these were highlighted as the most effective strategy. However, it was acknowledged that it was not always possible or appropriate to use this strategy. Secondary strategies were the reinterpretation of a problem/s where the situation is a viewed in a different way to prevent activation of the stress response. Tertiary strategies moderated the experience of stress and centred around self-care.

2.4.1 | Primary strategies

Primary coping strategies were the most effective strategy to use if appropriate. For example, if a nurse arrived at work and find that three nurses have called in sick, stress may be experienced because workload would most likely be increased. The problem would be a lack of staff, and therefore if the nurse was able to initiate the replacement with three other nurses of similar competence, then the problem and the stress would be removed. This might happen by the nurse contacting senior management and exploring the option of replacement staff.

2.4.2 | Secondary strategies

In some situations, it may not be possible to remove the problem/s, but a person may be able to use Secondary positive cognitive coping strategies and reinterpret it. Thus, in the face of an unavoidable stressor it may be possible to mitigate the experience of the stressor, or accumulation of stressors by a reappraisal which could place the stressor in a wider context. A stressor may be perceived as less of an immediate threat even though there may be significant emotional cues. For example, in the same situation described above, where there is a lack of nursing staff and no other staff are available to help, the attitude of the nurse could be focussed on instead. If the nurse assesses the situation and determines that she/he does not have any control over it, then a Secondary strategy may be the best course of action. For example, if the nurse makes a conscious decision to accept that the situation cannot be changed and calmly says to themselves, 'I am going to do the best that I can do today, with the resources that we have, prioritizing the safety of the patients', then this conscious choice of a positive personal attitude will enable the nurse to continue working, even though the environment is less than ideal. The alternative to this could be feelings of anger and despair

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and activation of the stress response. The ability to function when an emotional rather than a cognitive route is chosen will be diminished, nursing care may be of a lesser quality and the situation less than ideal for both the nurse and the patients. In a previous study by the lead author (A. W.), nurses were found to use a process of 'Selective focussing' to manage their stress and the safety of patients. This consisted of four strategies: self, needs, patient and quality focussing. The strategy taken depended upon the time available. For example, if time was very short then the physical needs of the patients would be focussed on with an emphasis on safety, and these were prioritized over psychosocial needs. These strategies increased the work satisfaction of nurses and minimized the stress experienced.[45]

There is evidence to suggest that use of Secondary strategies can be enhanced by improving a person's cognitive functioning. Cognitive training has been found to improve the positive neuroplasticity of a person's brain.[46] These activities appear to add new brain cells and in doing so cognitive abilities are improved. There are many different forms of cognitive training that have been shown to be effective such as meditation, mindfulness and cognitive behavioural training.

The rise of positive psychology over the past 20 years has promoted cognitive training in the form of gratitude interventions, as a means by which well-being can be increased. A literature review of 12 gratitude intervention studies found that well-being was improved.[47] A gratitude intervention can take many forms, but probably the best known is the 'What-Went-Well Exercise'.[48] When using this exercise persons are instructed to think about three things that went well for them that day every night before they go to sleep.

2.4.3 | Tertiary strategies

Tertiary strategies are all about mental and physical self-care, such as healthy eating and regular exercise. Tertiary strategies should be prioritised in day-to-day life as they are integral to well being. These strategies are something which we mostly always have control over but finding the motivation to use these strategies is sometimes difficult. When Tertiary strategies are regularly used stress can be moderated, because a person is better placed to use a cognitive approach when faced with problems, as they clearly and calmly use Primary and/or Secondary positive coping strategies.

Mental health self-care is as important as physical health. According to the World Health Organization, 'Mental health is a state of well being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community'.[49] There are many things that can be done to be mentally healthy and many guidelines and programs have been developed. For example, a community mental health promotion campaign conducted in Western Australia is an example of this. This campaign highlighted the importance of persons being proactive with their mental health and focused on three areas using the slogan: 'Act, Belong, Commit'. Act referred to being active in all ways, participating in a range of activities, physical or cognitive, either alone or with others. Belong

was about forming connections with others in the community by belonging to a group, either formally or informally. Commit was about making a commitment to participate in something regularly for the benefit of others, or for the achievement of a personal goal.[50] Maintaining mental health can be viewed as proactive activities which are personally chosen and participated in.

Relaxation is another important aspect of mental health as it can offset the negative consequences associated with prolonged activation of the stress response. A systematic review including meta-analysis of relaxation training showed that relaxation training was an effective nonpharmacological strategy for reducing anxiety.[51] Relaxation training includes deep breathing, progressive relaxation, meditation, mindfulness, guided imagery/visualization, and laughter yoga. In the cancer nurse educational program, we emphasized the importance of finding ways to relax each day and examples such as listening to music, reading a book, and watching a movie or television show, were provided.

2.5 | Evaluation of the www.pst stress management framework

Nurses who attended the cancer nurse well-being educational program provided written and verbal evaluation of the program immediately following and at 1–6 weeks afterwards. There were numerous positive comments regarding the www.pst stress management framework. For example:

> It was mainly the www.pst ... that is I think a very valuable tool to take away, to be able to help you with problem solving and just looking at things a bit more laterally ... sometime we forget that we can pull in other areas ... with the problem concerned. And whether it's a problem related to patient care, or related to nursing conflict, it's something that you know what can you do to help solve the problem. It's all what resources have you got available, what's outside of your control that you cannot change. And then, what other resources you can bring in to help you come to some sort of decent resolution or helping to solve the problem. (Nurse)

> So specifically, I really liked the stuff around ... the www.pst because we all know .... The rationale behind what we should be doing, what we could be doing, but I do think a strategy, I need something practical to hang my hat on. I am a nurse, that's what we do, so I think knowing immediately that the research was there and then being given a practical strategy, was what I probably enjoyed the most. (Nurse)

> Another nurse said, 'I do find the strategies, the primary, secondary and tertiary strategies, I have started them in my own patient care ... and for myself as well ... its certainly helping me'

3 | DISCUSSION AND CONCLUSION

Evidence supports the contention that the deleterious effects of stress are closely related to a lack of control. Further, that the normal state of people is one of helplessness and that learning how to increase perceptions of personal control is necessary before control can be exerted.[21] If we think we have control then, according to Lazarus & Folkmans' transactional model of stress,[18] we are likely to follow a more effective positive-cognitive coping pathway.

In this paper we have described the development and use of the www.pst cognitive framework for the management of stress. Although this framework was originally designed for use by cancer nurses as part of a wellbeing educational program, it could be used by persons in other cohorts. The framework facilitates use of positive rather than negative coping strategies. Positive coping has been demonstrated to promote wellbeing.[52,53]

The ability to use a cognitive framework facilitates high self-efficacy and psychological flexibility. The www.pst stress management framework presents a means of approaching and analyzing stressors in a quick and methodological way, that is likely to be remembered and used volitionally when needed at times of high stress. Without reference to cognitive frameworks, our brains attend to every detail of every situation each time, which can be overwhelming. Thus, we all have many cognitive frameworks for the various situations we experience on a day-to-day basis. These are often initially developed with cognitive awareness and over time become automatic.[54] Unfortunately, not all cognitive frameworks that we personally develop are likely to be positive. It could be argued that using suboptimal negative-reactive coping strategies, that we automatically deploy, are an example of a negative automatic cognitive framework. To overwrite these automatic responses, we need to replace them with another positive cognitive framework that can establish new neural pathways, that over time will ameliorate, and possibly replace the negative-reactive neural pathways.

In this article, we have suggested that the www.pst stress management framework can be beneficial in managing daily stresses, by increasing perceptions of personal control, and increasing use of positive-cognitive coping strategies. Use of this framework may assist with development of new neural pathways and increasing behavioural flexibility. Therefore, use of this cognitive framework may reduce the harmful effects of the ongoing activation of the negative-reactive stress response. Several hypotheses have been suggested within this paper, regarding the potential beneficial outcomes associated with use of this framework for managing stress. Further exploration of the use of the www.pst framework with different populations and settings is recommended, with close examination of both physiological and psychological outcomes. The addition of real-life scenarios specific to these populations and settings will enable application of the cognitive framework.

AUTHOR CONTRIBUTIONS

Anne Williams: Conceptualization; funding acquisition; writing–original draft; writing–review and editing. **Nigel Williams**: Conceptualization; writing–original draft; writing–review and editing.

CONFLICT OF INTEREST

Anne Williams and Nigel Williams declare that they are married to each other.

DATA AVAILABILITY STATEMENT

There is no data related to this manuscript

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