

**RACHEL C. SUMNER**

# **A BIOPSYCHOSOCIAL APPROACH TO HEALTH**

**FROM CELL TO SOCIETY**





1 Oliver's Yard  
55 City Road  
London EC1Y 1SP

2455 Teller Road  
Thousand Oaks  
California 91320

Unit No 323-333, Third Floor, F-Block  
International Trade Tower Nehru Place  
New Delhi – 110 019

8 Marina View Suite 43-053  
Asia Square Tower 1  
Singapore 018960

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Editor: Janka Romero  
Assistant editor: Emma Yuan  
Production editor: Rabia Barkatulla  
Copyeditor: Bryan Campbell  
Proofreader: Leigh Smithson  
Indexer: Adam Pozner  
Marketing manager: Fauzia Eastwood  
Cover design: Wendy Scott  
Typeset by: KnowledgeWorks Global Ltd  
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# 6

# STRESS AT THE PERSON LEVEL

## INTRODUCTION

Stress has been mentioned in more or less every chapter of this book so far, so it is high time that we look at it in more detail. This chapter will cover what stress is, what it means to individuals psychologically and socially, and how it has an impact on health. Both biological and behavioural mechanisms are used to illustrate the impact of stress on a variety of metrics of health at the cellular and person levels. Modulators such as appraisal and coping are used to demonstrate the subjectivity of stress, and this is then related to personal trait factors (like optimism) that play a part in the physiological experience of stress. We will take a look at some of the dynamics of stress and explore different types of stress (both good and bad). Finally, we will consider how stress is buffered by social support, one of the most important things that stands between stress and damage to our health.

## Learning Outcomes

- Define stress and its implications for health.
- Understand the importance of psychological factors to the experience of stress and coping.
- Describe different coping styles, how they may be employed during stressful experiences, and how these can have positive and negative outcomes.
- Appreciate the importance of social support in the psychological and biological experience of stress.

## WHAT IS STRESS?

We all instinctively know what stress is because we all experience it, but stress itself can be hard to define. What might be paralytically stressful to me may not even register on your stressometer and vice versa. Stress is very subjective. It is subjective between people, with people rating similar events quite differently, but it is also subjective within people. Think back to the second-to-last most stressful thing you experienced in your life. You may have thought ‘that was *the* most stressful thing I have ever been through!’, and you were absolutely right. However, the next time you experienced something horribly stressful, you thought exactly the same thing about that, and all of a sudden what used to be ‘the most stressful thing’ is now just a number in a long hit list of horrible experiences. Stress is in the eye of the beholder, but that is not to say that we cannot try to define it.

In terms of creating a definition of stress, many researchers have sought to adequately summarise stress in a way that can encompass the wide subjectivity of experience but still remain meaningful. Hans Selye, the godfather of stress, defined stress as ‘The nonspecific response of the body to any demand made upon it’ (Selye, 1976). Whilst this was a good attempt at explaining stress, we know now that the stress response is actually very specific. Moreover, we also know that stress is more than just demands made upon the body. In fact, more often than not in our modern lives, our stress is more about demands made upon our emotions and minds rather than upon our bodies. A lot of researchers have tried to describe precisely what stress is, but I think most of us now agree that it is a physical, emotional, and psychological state resulting from a discrepancy between what is being demanded of us (physically, emotionally, cognitively) and the corresponding resources we have (or feel we have) to be able to cope with that demand. The nature of the stressor can vary in terms of its severity, the extent to which it threatens which elements of a person’s life, its predictability or controllability, and how long it may last. Equally, the emotions that may come with those events

can vary as well. Some may induce fear, some anger, and some just a sustained feeling of worry and anxiety. Because stress is so subjective, whether a situation or event is determined to be stressful is down to the individual appraisal of the person experiencing it.

There have been three main ways that scholars have tried to define stress: as a response (i.e., an internal response to an external cue, designed to keep us alive), as a stimulus (i.e., the thing that instigates the internal response to action), and finally as a transaction (i.e., a dynamic process of appraisal that determines the salience of a stressor). The first theory was focused very centrally on the internal processes initiated during the stress response – the physiological and psychological responses to threat. The second was more focused on the thing causing the stress, with the idea that some things ‘just are’ stressful to whomever may encounter them. These two theories, whilst partly true, are quite insufficient given the varying degree between and within people that something that causes stress is determined to be stressful. The final model, the Transactional Model of Stress (later updated to be the Transactional Model of Stress and Coping) developed by Richard Lazarus and Susan Folkman (1984) is perhaps the best way of considering the nature of stress with the required subjectivity of understanding that situations and circumstances may vary. Essentially, this model dictates that we appraise a potentially stressful situation in two ways. First, we must determine whether it is a threat to us: what degree of harm could it cause us? What aspects of my life/welfare or the lives/welfare of the people or things I love does it threaten? If we determine here that the thing is not *that* worrisome, then we do not become stressed. If, on the other hand, we determine that this thing is in some way a threat, we undergo another stage of appraisal: can I cope? Do I have the resources available (or can I get the resources) needed to manage the stress this will cause? If we get through this stage and realise that actually we do have the resources to cope (whatever they may be) then this too is not considered to be too threatening. If, however, we determine that this stressor exceeds our resources to cope, this is when we experience stress. We will consider coping later in this chapter, as it is clearly an important element in not only what stress may result in, but also in the way that we determine something to be stressful.

One final note on defining stress is about valence. We tend to commonly talk about stress in very negative ways. We don’t like it. It makes us feel bad and we cannot wait to get past it. However, stress is also sometimes useful. It teaches us about our boundaries and limits, as well as how we can smash through them and stay on our feet. The adage of *what doesn’t kill you makes you stronger* very much works for the psychological experience of stress. We adapt and grow around the things that challenge us, and our experiences (and our ability to cope with them) can be a tremendous source of empowerment if we are able to focus on our resilience and inner strength. This type of stress is referred to as **eustress** (as opposed to distress), and it can be tremendously important

in allowing us to grow psychologically. Think back to one of those times when you had ‘the worst’ experience of stress you had ever had. When you think about it now, do you feel pride that you were able to overcome it or otherwise get through it? Relief even? So much of these tests to our capabilities can be positive sooner or later. Physiologically, however, the story is a little different. Or, at least, the story is a little different now. Back when these responses first evolved it may well have been the case that as our stress responses were used and resolved we may have strengthened certain aspects of our bodies. Nowadays, that is not usually the way our stress works.

## STRESS TYPOLOGIES

When we try to categorise stress, we can think of a variety of different ways of doing this. We could categorise it according to what is under threat (e.g., is it financial stress, relationship stress, or work stress?). We could also consider to what extent it may infiltrate the person’s life (e.g., does it impact our working life, our home life, or everything?). Each of these, however, is also very subjective. In psychological theory and research, we tend to categorise stress in two main ways: acute and chronic. **Acute stress** is usually something quite episodic. It could last for a minute, a day, or even a year, but we would know at some point that it will end. It could be a minor hassle, or something that turns your entire life upside down. It could be getting stuck in a traffic jam on the way to work, having to sit an exam, or even having to write a book because you had a conversation with a publisher and things quickly got wildly out of hand. The key to acute stress is that it is short-term – you know that it will end and may even know when it will end. **Chronic stress**, on the other hand, is a stressful situation that we can’t necessarily see the end of. It could be something associated with a long-term change to your lifestyle or welfare, or it could be the loss of someone or something that could be permanent. Examples of chronic stress that are used widely in this field of research are things like bereavement, job loss and unemployment, or caring for a sick, elderly, or disabled relative. These are referred to as ‘models’ of chronic stress, and whilst none are perfect (in that each one will be experienced very differently by different people) they are the closest things we have to what could be termed ‘universally’ stressful experiences (i.e., put pretty much anyone in that situation and they will be very stressed). Both types of stress can and are used in research to make sense of the ways that psychological experiences and situations can impact our health, and there have been decades of research carried out to make sense of the ways that these experiences get under our skin, and the person-to-person variation in these mechanisms that means that some will be more vulnerable than others to these experiences.

## THE BIOLOGY OF STRESS

In Chapter 5, we looked at the hormonal stress axis as a way of describing endocrine function and communication. This was a very brief introduction to the physiology of stress, so here we will look at that in more detail. The physiological stress response is ancient in evolutionary terms, and we share it with pretty much all other vertebrate animals. It is perfectly designed to give us a bit of physical advantage in times of critical threat. The premise is quite simple: ramp up everything you need for peak physical exertion. Your body does this in two ways, it will selectively augment our ability to exert (through allowing faster and fuller blood flow, mobilising molecules for metabolic energy, and giving a boost to our brain to make split second decisions), and depress non-essential systems to allow energy and molecular support to be diverted to where it is needed at that stage. As outlined in Chapter 2, this is the sympathetic nervous system (SNS) in activation. If we are fighting or running away, we need our muscles and our brains to be prioritised for blood flow that will be carrying oxygen and nutrients, so our hearts beat faster, our vascular tone (the tension of our blood vessels) is optimised to create a balance between volume and pressure, our airways dilate to allow us to absorb more oxygen, and our livers and fat stores dump glucose into our bloodstream. The pupils also dilate to allow as much visual information in as possible so that we can make snap decisions during our fighting or running away. Some other minor tweaks that are made are small boosts to both adaptive and innate (humoural and cellular) immunity, including the mobilisation of blood-clotting factors in case we are injured. Almost all the other changes made by the SNS at this stage are to divert energy away from 'non-essential' systems and processes, to push everything we've got into our physical efforts of survival. Our digestive system is slowed down, any processes involved in bone maintenance or growth grind to a halt, and our sex hormone signalling is dampened. So at the time of fight or flight, we are pushing our cardiovascular systems to their limit, mobilising energy to feed our muscles, brains, and hearts, providing a safety net of clotting factors in case we are injured, and basically quietening everything else down to support this huge effort. This is a perfectly balanced system if we need to fight or run away, and it has without doubt ensured the survival of our, and many other, species. The problem is, though, that we don't often need to fight or run away anymore. We considered this briefly in Chapter 1, but will go into this in more detail now.

One thing you may be wondering about at this stage is why this still happens when we don't really need it so much. Well, the thing is we *do* actually still need it quite a lot, but perhaps in different ways. If you suddenly need to jump out of the way of a car coming towards you, or need to drop everything and run to that meeting or that

class you forgot about, or need to deadlift that heavy box that you accidentally just set down on your toes – all of these can utilise your fight-or-flight response. The way we can make sense of what might happen to someone if they did not have a good fight-or-flight response is by observing what happens to people who have diseases and disorders of these systems. There are some diseases that affect certain systems in the body, meaning a physiological stress response cannot be created, such as Addison's disease (characterised by under-production of cortisol and aldosterone). People with Addison's disease can still *feel* stressed, but if they put their bodies in stressful situations then they cannot mount an appropriate physiological response to cope with it. Imagine trying to run for a bus without increasing your heart rate, blood pressure, or available energy in your bloodstream – what do you think would happen? In the case of Addison's disease, it can cause a state of *adrenal crisis*, which requires urgent medication. So, as much as the fight-or-flight response may not be perfectly attuned to our modern way of living, it is still essential and still serves a purpose. The real problem we encounter is that we don't enact the behaviours necessary to de-escalate that SNS response. The parasympathetic nervous system will kick in to undo all those actions (and send us back into *rest and digest* mode) if we physically exert ourselves. That is the way this whole system has been evolved to work: we experience stress, we prepare to deal with it, we deal with it by exerting ourselves, our stress response subsides, and we return to baseline. What has changed with our modern lives is that we do not do the physical exertion part. More often than not, we get stressed at computers, behind the wheel of the car, sitting down in conversation with someone, or otherwise in a very sedentary state. It is less that our bodies are out of step with our lives, and more that our lives are out of step with our bodies.

Along with not adequately using (or resolving) our fight-or-flight response, we also tend to activate our stress responses too frequently, and for far too long. Humans also have the unique ability to set off the stress response ourselves. How many times have you lain in bed at night thinking about all the things you have to worry about? That awkward conversation with the person you were trying to impress. The exam or the deadline you have coming up soon. The family event that you're secretly dreading. It could even be just reliving some embarrassing or stressful events you have already been through in your long distant past. As if this wasn't enough, we also like to go out of our way to make ourselves stressed too. We may watch horror films, go on roller-coaster rides, participate in open mic events or other types of performance, or – worse still – we may sign up for some sort of networking event. We tend to live our lives lurching from one stressful situation to the next, and in this way even acute stressors, if serially encountered and not physiologically resolved, can cause problems for our health. When chronically turning on stress responses and not resolving them adequately we

are ignoring the need to de-escalate these physiological cascades, and causing a serious amount of wear-and-tear. This wear-and-tear is referred to as **allostatic load**, and it is a significant problem for our health.

## Allostatic Load

Allostasis refers to the careful balance of each of our bodily systems. You may have heard of *homeostasis* before, which is the ability to ensure we retain a good balance of things that we need (hydration, blood sugar etc.). Allostasis is about ensuring that our systems are working in a good balance. As we have already seen, the various systems we have are intimately entwined, and often share the same hardware/software to operate. Allostasis is the ability for flexibility and function in each of our systems to keep us working at our optimal levels, and adapting to our environments efficiently (McEwen, 1998). The fight-or-flight response is essentially allostatic because it is tinkering with a variety of systems in the body (immune, endocrine, digestive, cardiovascular). This is allostasis in its basic sense – the ability to regulate a variety of different processes using a variety of different pathways with some processes being ramped up and others slowed down. If the stress response goes on for too long and is not in some way resolved, some systems that are dampened remain so in favour of more ‘essential’ systems for that context (i.e., stress). Professors Bruce McEwen and Elliot Stellar (1993) proposed that ongoing allostasis could cause *allostatic load* (sometimes referred to as allostatic overload also) – where a constant demand on bodily systems causes internal competition for resources, and reduces the ability of the individual to cope either psychologically or physically with new demands. Professor Robert Sapolsky describes allostasis as being like two elephants on a seesaw – it may be in balance, but so much weight on either side will cause something to break eventually (leading to allostatic load). The more the elephants lurch up and down on the seesaw, the more damage is done to the seesaw itself and to the infrastructures around it that are affected by its movement. It is an excellent analogy. Another type of allostatic load has been characterised – Type 2 – where overload occurs due to subtle but persistent social conflict/disturbance. They don’t necessarily require very strong responses like major trauma, but over time can cause a great deal of damage (McEwen & Wingfield, 2003). The types of stressors in this second category can be more damaging because they can sneak up on us without us consciously knowing how much damage they cause.

## Key Questions

Some people may be more vulnerable to allostatic load than others - that could be due to a variety of factors. What biopsychosocial factors do you think might explain variance in allostatic load?

- Allostatic load can be initiated from more than just stress. Any time we are creating an over-exertion of the balance of our bodily systems we are potentially putting ourselves into allostatic load.
- What sorts of things might these be? (Think: behaviours, lifestyles)
- When in our lifetimes might these occur?

The perspective used to explain allostatic load relies on looking at the body as a whole made from smaller systems. To quantify allostatic load, we have to examine the way multiple systems are working to adequately determine if someone is or is not experiencing it. Rather than just focusing on whether or not someone under stress develops an illness, looking at multiple biological markers of physiological functioning can tell you more about the internal state and its vulnerability to illness (McEwen & Seeman, 1999). Measuring the function of the HPA axis (by looking at stress hormones like **cortisol** or **dehydroepiandrosterone**), the SNS (with **adrenaline**, **noradrenaline**), the cardiovascular system (using blood pressure, heart rate, or **heart rate variability**), and metabolic markers (waist-to-hip ratio, ratio of low-density to high-density lipoprotein) can tell us not just about potential chemical mediators to disease, but also about likely contributors to pathology. This perspective allows us to see and understand not just what happens when we are stressed and that this affects our health, but also the underlying mechanisms for it. Allostatic load and the impact it has on multiple systems is one of the key ways in which we can make sense of the multiple impacts on health that occur through each of the aspects on the health onion, such as socio-economic status, social relationships, lifestyles, work factors, genetics, gender, and ethnicity (Beckie, 2012). We can also make sense of the impact of life course events on health through allostatic load, within observable pathways from adverse childhood experiences right up to the way that we age over our adulthood having an impact on allostatic load and its subsequent impact on our health (Guidi et al., 2021).

## STRESS AND BEHAVIOUR

Whilst most of this chapter so far has focused on the biological aspects of stress, remember that it's not just biological changes that impact health. Stress is an excellent

example of biobehavioural influence on health in terms of how our behaviour may adapt in the face of it. When something makes us stressed, we may be more likely to adopt negative health behaviours (such as eating unhealthy foods, or using alcohol or tobacco) and less likely to engage in positive health behaviours (such as exercise and getting enough sleep), so there is a double effect on our health from that perspective. The lack of physical activity during times of stress is a real big hitter because this is actually what we are designed to do when our stress response initiates, and it is the one thing that will allow the resolution of the physiological stress response and the re-initiation of parasympathetic activity. There are a lot of cultural and social factors wound up in the way that we respond to stress behaviourally, and whilst they can differ from community to community, and may change with generational trends, we as humans are all pretty united in these responses being less than ideal for our physical health.

Generally speaking, our behavioural responses to stress could be considered to be as a result of stress (for example, being able to exercise less because you are so busy working towards an assessment, or losing sleep because you are worrying), or could be a response designed to cope with the impact of stress (for example, self-medicating with tobacco, alcohol, or other substances, or engaging in unhealthy/unwise behaviours to distract yourself from the stress). There is also the nature of the stressor to consider when it comes to impact on behaviour. If someone is stressed because they are in debt, or because they otherwise cannot afford to pay their bills, the resulting impact on behaviour may not be a direct result of the stress, it could be a consequence of the thing causing stress itself. The links between stress and behaviour become even more complicated when you consider that over time stress can have an impact on overall mental health as well, impacting our motivational states and attitudes towards staying healthy. Just as there are layered biopsychosocial influences on health, there are layered biopsychosocial influences on behaviour too. It makes things very complicated, but that's because people are complicated. Chapter 7 will consider this a little bit further when it comes to thinking about stress at the group/population level. Diving into these complicated intersections really requires an entire book dedicated to it, so for now I have included some recommended reading at the end of this chapter if you would like to learn more about this fascinating area. To get a feel for how complex and nuanced the relationships between stress and behaviour can be, have a go at the next activity.

## Key Questions

Try to use the Health Onion in a different way now, and consider what influences each of the layers may have on our behaviour. Choose one type of health behaviour (this could

be positive or negative), and consider how someone's behaviour may change in response to an acute stressor (e.g., an exam period, or a house move). This could be in consideration of our emotional responses to the behaviour, or our attitudes to the behaviour, but it could also be about the accessibility/availability of the behaviour in general. Try to think within and across cultures as well.

- Consider what impact the stressor itself may have on the behaviour.
- Consider what impact coping with the stressor may have on the behaviour.
- Are there types of people that may be more or less likely to engage or not engage in this behaviour in response to that stressor?

## STRESS MODIFIERS: APPRAISAL AND COPING

I have already hinted in previous sections of this chapter about a very important aspect of stress and health: coping. **Coping** is very important because it is the way we manage stress, and it can impact our behaviour, our thoughts and feelings, and our overall responses to the stress we encounter (both psychologically and biologically). It is yet another area of the fascinating field of stress that could have (and has had) an entire book written about it. How we cope (or do not cope) with stressful circumstances can have a huge impact on both our mental and physical health. The coping method itself can also have a direct impact on health, as discussed in the last section. If we choose to use alcohol to cope with our problems, this has direct consequences for our cellular and systems-level physical health, and will likely impact our mental health over time as well. It may even permeate into our social health, degrading our relationships with others and making a bad situation even worse. There are many different types of coping, and generally speaking we will all adopt different types of these coping styles in different ways depending on different stressors. Before we dive into coping styles in more detail, try the next exercise to see how you might cope with some of these stressful scenarios.

### Key Questions

Consider the following stressful scenarios and how you might cope with the stress you experience from them. Perhaps you have already encountered some of these and can reflect on how you dealt with them at the time and think about whether you would still use the same method of coping if you encountered them again, or whether you would adopt a different strategy.

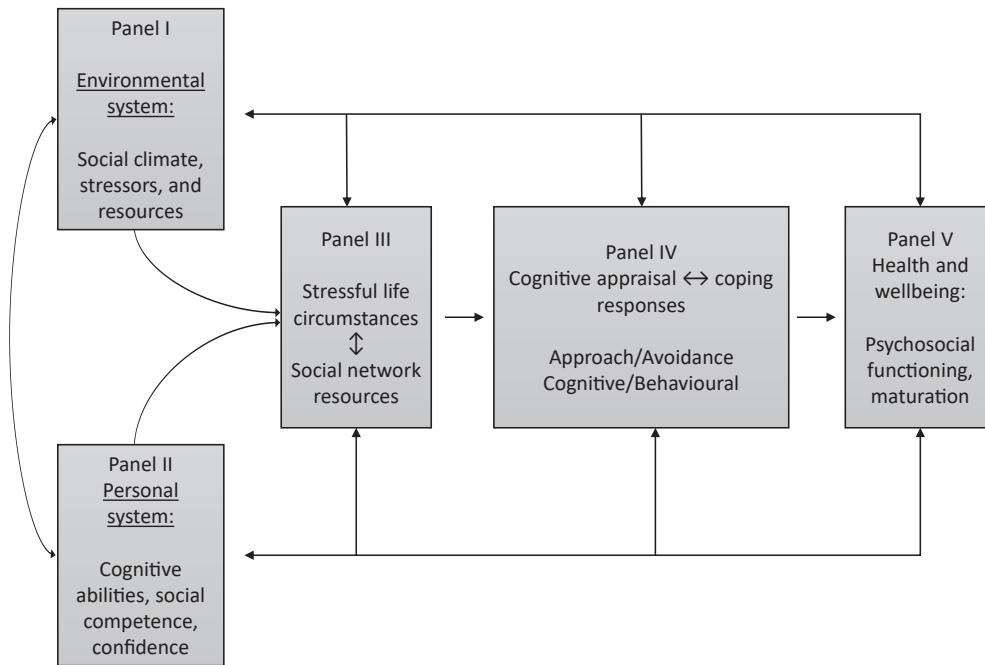
- 1 Moving house
  - 2 Sitting an exam that carries 100% of the course credit
  - 3 Losing your job
  - 4 Being diagnosed with a chronic health condition
- What types of behaviours do you/would you engage with in dealing with these stressors?
  - Are they all the same, or do you use different tactics for different stressor types?
  - Do you use one way of coping, or do you employ lots of different ways of coping?

Carrying out that activity will have hopefully shown you that you have used (or would use) a variety of different methods to cope with stress. There are some types of stressors that we meet head on – we will seek out information about them, take active steps to confront them (or perhaps break them down into smaller, less intimidating components), and ensure we are as prepared as we can be to deal with them. This is referred to as *problem-focused coping*. Another way of coping can be to deal with the emotional fallout of the stress – to attend to our feelings about the stressor, to manage our emotional pain or distress that will result from experiencing that stressor. That is referred to as *emotion-focused coping*. Whether or not we adopt problem-focused or emotion-focused coping will depend on a myriad of personal factors that will be decided by your individual personality, your culture, your upbringing, and your available resources, but may also be dependent on the type of stressor. As well as where our efforts are focused (the problem itself or our emotional responses to it), we can also consider coping in terms of its style, in whether it is avoidant (i.e., if we do our best to avoid both the problem and its emotional consequences) or adaptive (i.e., if we choose to confront the problem and/or its emotional consequences). In considering styles, we can see that certain behaviours that we may turn to in stressful scenarios can be a mixture of both focus and style. To take one of the examples of the exercise, receiving a diagnosis of a chronic medical condition, we can choose problem-focused coping that is both adaptive (e.g., researching the medical condition, connecting with others with a similar diagnosis for informational support) and avoidant (e.g., not exercising to avoid pain or flare-ups of symptoms). We could also choose an emotion-focused coping strategy that is either adaptive (e.g., we talk about how we feel to a counsellor or close friend) or avoidant (e.g., we start to eat more comforting food in greater excess to deal with our feelings of stress). We can break this down further by also considering that coping strategies might be cognitive or behavioural. We may choose to tackle a problem by researching our problem and gaining information (a cognitive, problem-focused, adaptive style), by engaging in exercise (a behavioural, emotion-focused, adaptive style), by some ‘mind

over matter' technique (a cognitive, emotion-focused, avoidant style), by consulting an expert (a behavioural, problem-focused, adaptive style), or by using drugs or alcohol (a behavioural, emotion-focused, avoidant style). What is most likely is that we will engage in a few different ways of coping, and some of these will be positive and some will be negative. In this way, if the negative means of coping tends to be preferentially engaged, then we may have far worse outcomes, and the opposite may be true for preferential use of positive coping mechanisms. How we may choose to deal with a certain stressor can vary from person to person, and from time to time. It will depend on what else we are dealing with at the time (rarely does any stressful life event emerge on its own, or simply impact one aspect of life), and how we feel about the stressor and its level of potential threat to ourselves, our welfare, or the welfare of those we value.

Considering how relative our coping is to both ourselves and the nature of the stressor that we are confronting, it has been difficult to develop suitable models for coping that can consider the huge number of factors that are likely to be involved. Lazarus and Folkman (1984) have also developed a transactional model of coping, which critically also incorporates the capacity for positive emotions to result from our stress and coping experience, such as finding a new or renewed meaning to life. This model is very helpful when considering some of the complex and life-changing stressors that can occur, that are rarely straightforward and rarely result in one emotional response. However, this model does little to account for some of the more complex environmental factors that are associated with our ability to cope, and our adoption of particular coping styles. There is likely a great deal of interplay between both the person's individual appraisal of the stressful situation and the resources they may draw from in their environment at any one time. To expand on this further, sometimes things are stressful *because* of our context – in other words, they would not be stressful (or perhaps as stressful) if our situation were different. For example, if you lose your wallet with all of your important personal effects such as bank cards, driving license and so forth – how much more stressful would this be if you were to do so in another country, where you do not speak the language very well, where the legal and practical systems may be unfamiliar, and where you have not yet established a social support network? The context of the stressor can be just as important as our personal appraisal in determining both how stressful something is and how we cope with it. Another model that attempts to account for this complexity comes from Rudolf Moos (1984), who is credited as the first scholar to attempt to incorporate the intricacies of our social environment into a model of coping. This model views coping not just as a transaction between person and stressor, but also their social and physical environment, and a consideration of their current status of health and wellbeing (see Figure 6.1).

The model looks quite complex, but if we are looking to consider broader contextual factors into our understanding of how someone will cope with any given stressor at any



**Figure 6.1** Moos' (1984) Framework of context and coping

Source: Author's own drawing, with permission of John Wiley & Sons

given time, there are a variety of elements that will be involved and that will influence each other. Panels I and II provide the contextual element of the coping framework, where our personal and environmental systems are important in deciding the way that we will cope. Each of the factors within these domains will vary throughout someone's life, even if the same type of stressor is experienced more than once. Consider how you have experienced moving house. If this has been more than once, you will have been at different life stages, with different personal competencies, and there will have been different contextual reasons around that house move. Panel III considers the interplay between the other stressful experiences that may be going on at the time, as well as the availability of a support network (more on social support soon). Panel IV is our Lazarus & Folkman style appraisal element, that there will be an appraisal of the stressor and our perceived ability to cope with it. Finally, Panel V is about our current health and wellbeing, and how those factors will influence our experience of the stressor and our ability to cope with it, as well as being directly influenced by the stressor and our coping, recognising that the relationship between health and wellbeing and stress and coping is reciprocal. Each of the panels plays a part in the overall ability for the person to cope, but they also influence each other. The consideration of environment and context with this model is very important not just because our context can change, but also

because not everyone is the same, nor do they live in the same context. This model has also been highlighted as an important step towards considering a culturally relevant and appropriate consideration of coping, where our personal cultures (made up of any of the micro, meso, and macro layers that we considered in Chapter 3) will be hugely varied from person to person, from nation to nation. Culture is a complex factor to consider and will likely have an impact on each and every one of the considerations within that model, which is why it has been argued that – as a consideration – it sits around the entire model, influencing each of the individual components as well as their interplay (Chun et al., 2006). Two basic concepts within culture are the two dominant types of social interrelation: collectivism and individualism. Collectivism is the concept that we are all connected, that we as individuals in our society are interdependent with one another, and our society is dependent on reciprocity and mutual effort. Individualist cultures are more centred on the concept of being independent and looking after ourselves, that we must be responsible for ourselves, our actions, and the consequences of those actions. They are somewhat diametrically opposed, but they exist on a continuum, with micro, meso, and macro cultures sitting somewhere along that spectrum. You will also have personal variation within those cultures, with individuals that exist in individualist societies that take on a more collectivist personal philosophy and vice versa. Culture is incredibly complicated, but it is important to be considered. I can only scratch the surface in this chapter, so I have added some important and interesting further reading options at the end that will help to unravel some of these complexities.

## Optimism: the Double-Edged Sword

One seemingly positive way of coping with stressful situations is through **optimism**. If we are generally more optimistic, we may be more likely to frame stress in a less negative way (so it could be appraised as more of a challenge than a threat), meaning we may not suffer the stronger ill effects of stress (Baumgartner et al., 2018). If we are more optimistic about the future, we may also be more likely to take control of our health, make better health behaviour choices, and be higher in self-efficacy when it comes to stressful situations (Schwarzer & Fuchs, 1996). People with an optimistic outlook tend to frame stress in either a situational way (e.g., ‘This situation is terrible, but others are not’), a temporary way (e.g., ‘this won’t last’), or an external way (e.g., ‘it’s the situation, not me’). Compared with those who are pessimistic, optimists tend to have longer, healthier lives (Lee et al., 2019). Optimists tend to have lower levels of inflammation, will physiologically respond to stress more conservatively (e.g., lower blood pressure spikes), and are much less likely to die from cardiovascular events such as myocardial

infarction (Baumgartner et al., 2018; Everson et al., 1996; Roy et al., 2010). Optimism appears to impact individuals' coping mechanisms, with positive associations between optimism and more 'approach'-oriented types of coping (or adaptive coping), and negative associations with avoidant coping styles (Nes & Segerstrom, 2006). Research with HIV patients has also found that optimism is associated with more proactive behaviour and lower levels of depression, overall being associated with a slower decline in key T-cells associated with HIV disease progression as well as with a lower HIV viral load (Ironson et al., 2005). Optimism is also associated with more active coping strategies such as positive reappraisal, which has, in turn, been associated with better immune outcomes as well (Koh et al., 2006). This all sounds like an all-round win for optimism. Unfortunately, the case for optimism is a little more complicated.

Unrealistic optimism, where someone always assumes good outcomes will happen, may not actually be all that helpful when it comes to stress and health. Optimistic bias – the mistaken belief that chances of negative events are lower, or chances of positive events are higher than most people's – can influence people to engage in *less* positive health behaviours and to take more risks. Weinstein (1982) asked students to rate how likely it would be that they would develop a health condition (e.g., substance dependence disorder, developing cardiovascular disease, cancer, and other chronic health conditions) to investigate how prevalent optimistic bias was in this cohort of young people with their whole lives ahead of them. The majority believed they were 'much less likely' than their peers to develop the health problems, and those that were high in optimistic bias were far less worried about the risk of these issues and considered each of the outcomes less severe than those with less optimistic bias. This has been seen in other samples, with a review of a substantial amount of literature looking at a wide variety of other health conditions (e.g., HIV, substance abuse etc.) (Helweg-Larsen & Shepperd, 2001).

If being overly optimistic is bad – is it more advantageous to be less optimistic? Optimists tend to have better moods, and this alone is beneficial for health (Wengler & Rosén, 1995). On top of this, optimists have been shown to have better immune function, and to help sustain immune function under stress (Segerstrom & Sephton, 2010). In law students, those who were more optimistic about their future academic success had far fewer immune decrements during the stressful period of exam time (Segerstrom et al., 1998). Optimism is associated with lower cortisol, and in women has been associated with markers of inflammation like **C-Reactive Protein** (Steptoe et al., 2007). As well as having different physiological reactions to stress, optimists tend to employ different coping strategies in times of stress, which – as we have seen above – can be positive and negative. Optimists are more likely to try to actively change stressful events, or engage in proactive problem-focused coping, whereas pessimists are more likely

to passively disengage during times of stress and will ruminate a lot more (Carver & Connor-Smith, 2010). Rumination has also been linked to excessive self-criticism, a past history and/or tendency towards depression, and an over-reliance on others (Spasojević & Alloy, 2001). Overall, there is good evidence to suggest that optimism can protect our health provided that it is not unrealistic and is deployed in the right scenario. In a brilliant article summarising what was known of the field at the time, Professor Suzanne Segerstrom examined the literature on optimism and immune responses, finding that optimism was associated with better immune outcomes when the stressor itself was relatively simplistic, short-lived, or otherwise controllable, but could be damaging for those types of stressors that are more complex, chronic, and uncontrollable (Segerstrom, 2005).

## SOCIAL SUPPORT

I will conclude this chapter with one last, but very significant, consideration for understanding stress: **social support**. One of the biggest names in stress research, Professor Sheldon Cohen, posited social support as a key player in the stress/health relationship, coining the term the *Stress Buffering Hypothesis* (Cohen & Wills, 1985). Social support is supposed to have benefits to health via three main pathways: behaviourally (by encouraging and supporting good health behaviours), psychologically (by helping to reframe stress appraisals and manage emotions), and via cellular mechanisms (both immune and endocrine) (Uchino et al., 2012). Social support is all about the *quality* of your relationships rather than the quantity – you can have hundreds of friends, but they may not be able to provide the support that you need. Social support can provide a variety of benefits in dealing with stress, and – in a similar manner to coping – can be associated with confronting the stressor, or dealing with the emotional fallout. Social support can provide validation, encouragement, more positive perceptions of self-efficacy, and reassurance. Sometimes social support can provide more tangible means of support as well, in providing information or perhaps financial support. Critically, social support is in the eye of the beholder, with many studies that consider it using a measure of perceived social support, rather than some objective measure of the number of social contacts, the frequency of social interaction, or some other observer measure of the quality of a support network. Social support can come from friends, family members, colleagues, romantic partners, pets, or even people you have never met before. As a social species, we are innately geared to be empathetic to others, and many of us that feel that empathy towards others choose to display it by the offering of support, either

‘moral support’ through statements of validation and encouragement, or more physical means of support by standing up for and standing by those that need our help.

Social support falls into three domains: informational, emotional, and instrumental (Taylor, 2011). Informational support is as it sounds – a type of support that helps in providing information. This could be in terms of novel information about the problem you are facing, advice about a course of action, or simply a different perspective that will assist in breaking down the components of the stressor to understand how to overcome it. Emotional support is that type of support that helps us to feel that we are heard, that others understand our feelings, that our feelings are not ‘wrong’, and that despite how much we may be struggling, we have those around us to give us love and encouragement. Instrumental support is a more tangible means of support, which could be in the form of financial aid, the loaning of a physical resource such as a car, or the offer of a place to stay. Further, we don’t actually have to physically receive these types of support to benefit – just knowing that such support is available should it be needed is enough for us to feel supported and cared for (Taylor, 2011). Each of these types of support will offer either direct means to cope with the stressor (for example through providing material benefits or guidance), or indirect means to cope by attending to the emotional aspects of stress (through offering positive social interaction or feedback, for example). Much like the way in which we cope, the way in which we seek support from others is culturally relevant, with deeply complex cultural expectations and norms for both support seeking and support offering (Chen et al., 2012; Kim et al., 2008; Taylor et al., 2004).

Social support is a well-established buffer to psychosocial stress, with a wealth of evidence demonstrating its ability to counter the most harmful effects of stress (like depression) from a variety of different domains in life, such as work stress (La Rocco et al., 1980), academic study stress (Wang et al., 2014), financial stress (Peirce et al., 1996), involuntary job loss (Canavan et al., 2021), and divorce (Kołodziej-Zaleska & Przybyła-Basista, 2016) amongst many others. Conversely, we can also see the impact of losing a social support network, as has been demonstrated in migration in both those that emigrate and those left behind (Lu, 2012). On the cellular level, social support is associated with lower levels of inflammation (Uchino et al., 2018), stronger immune responses to vaccination (Gallagher et al., 2008), lower cortisol reactivity after acute lab-elicited stress (Heinrichs et al., 2003), and lower cortisol in general life stress (Rosal et al., 2004).

We also know that social support is highly beneficial to those coping with major health issues, such as the experience of significant health events or the diagnosis of a chronic or terminal health condition. There is a huge amount of literature that evidences the benefits of social support in both psychological and physical health

outcomes for those that experience myocardial infarction (heart attack) (Mookadam & Arthur, 2004), as well as those who are diagnosed with HIV (Nott et al., 1995), breast cancer (Nausheen et al., 2009), Type 2 Diabetes (van Dam et al., 2005), multiple sclerosis (Briones-Buixassa et al., 2015), and chronic obstructive pulmonary disorder (Barton et al., 2015), and those who suffer chronic pain (Che et al., 2018), to provide a handful of examples. This is an important consideration, as many health issues can carry with them significant psychological difficulties. Moos and Schaefer (1984) describe health changes as a crisis that can impact a variety of different domains. There are changes to identity, where we suddenly go from 'healthy' to 'unhealthy', we may be physically away from our homes or normal living location if we are bed-bound or hospitalised, we may lose our independence, we may lose contact with our social support network (particularly if we lose our independence), and we may have to re-evaluate a once relatively known future. The adjustment to chronic illness or life-changing diagnoses is a huge field in health psychology, and there is a lot of evidence for the role of social support in helping to adjust and make positive changes thereafter. Having considered how social support can help mediate stress at the (inter)personal level, we will go on, in Chapter 7, to consider how loneliness, which is in part an absence of a support network, has strong associations with stress.

## Learning Outcomes Summary

- Define stress and its implications for health.

*We have looked at different stress typologies and have examined different mechanisms by which stress can impact health.*

- Understand the importance of psychological factors to the experience of stress and coping.

*We have looked at psychological and behavioural factors in both the experience of stress, and as a result of trying to cope with stress. We have explored some of the ways in which psychological and behavioural factors in coping with stress may make health outcomes worse.*

- Describe different coping styles, how they may be employed during stressful experiences, and how these can have positive and negative outcomes.

*We have explored a variety of different types of stress and coping models and have looked at how they can help us understand some of the varying ways we may deal with stressful*

*experiences. Optimism was used as a case study for how individual factors can relate to both stress and coping, and their impact on health.*

- Appreciate the importance of social support in the psychological and biological experience of stress.

*We have looked at types of social support, what they offer to us psychologically, and how it can help to support our health. We have looked at the specific examples of receiving a diagnosis of a chronic health issue, as well as social support in cellular markers of health.*

## FURTHER READING

Anisman, H. (2014). *An introduction to stress and health*. Sage.

An excellent book entirely dedicated to the health impacts of stress. Chapter 2 (coping), Chapter 3 (hormonal changes due to stress), Chapter 5 (immunological changes due to stress), and Chapter 6 (stress, immunity, and disease) are particularly useful.

Dhabhar, F. S. (2009). Enhancing versus suppressive effects of stress on immune function: Implications for immunoprotection and immunopathology. *Neuroimmunomodulation*, 16(5), 300–17.

A great overview of the different ways that acute and chronic stress affect our immune function.

Juster, R. P., McEwen, B. S., & Lupien, S. J. (2010). Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience & Biobehavioral Reviews*, 35(1), 2–16.

A wonderful and informative review paper written by some of the biggest names in the field. This paper will walk you through what allostatic load means, and how it has been used in research to understand the implications of stress for health.

McEwen, B. S., & Lasley, E. N. (2002). *The end of stress as we know it*. Joseph Henry Press.

An excellent book written by one of the biggest names in stress research, Bruce McEwen.

Stephens, R. (2015). *Black sheep: The hidden benefits of being bad*. John Murray.

A very entertaining and well-informed book on some of the more controversial areas of life. The chapter on stress (Chapter 6) is particularly relevant here, but the whole book is a great read.

Uchino, B. N. (2006). Social support and health: A review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioral Medicine*, 29(4), 377–87.

An excellent article summarising the various mechanisms by which social support has been evidenced to support health.

Wong, P. T., Lonner, W. J. & Wong, L. C. (2006). *Handbook of multicultural perspectives on stress and coping*. New York: Springer.

This edited volume provides a variety of perspectives on the multicultural aspects of coping, both on the individual and collective levels. There are some excellent chapters here that consider elements of culture (e.g., collectivist versus individualist) and how these filter down to personal choices in coping styles.

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