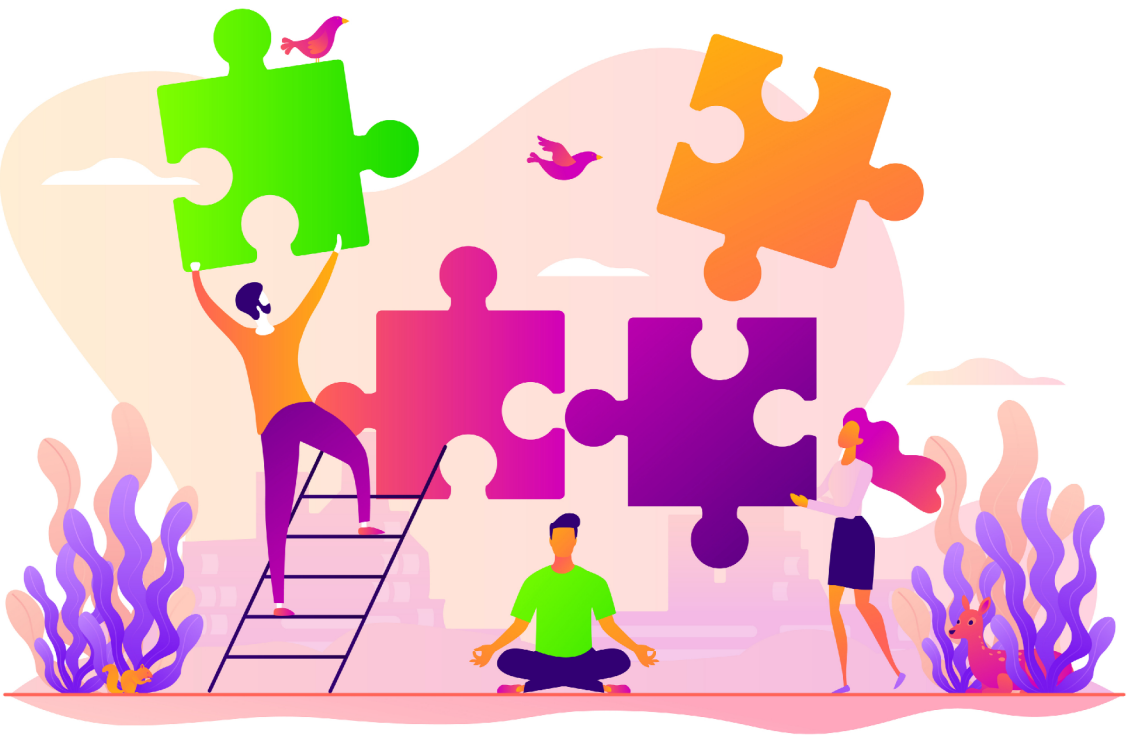
CHAPTER SAMPLER

Optimizing Academic Wellness

Prioritizing Mental Health in Academic Communities Individually and Collectively



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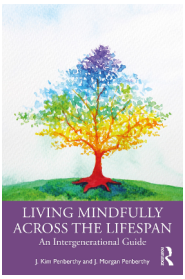

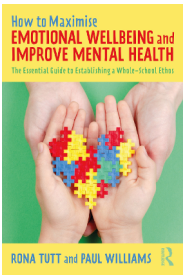

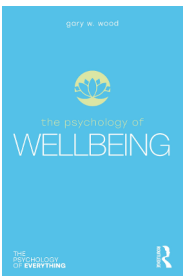

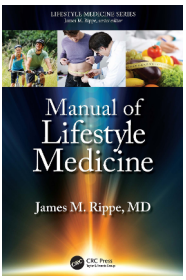

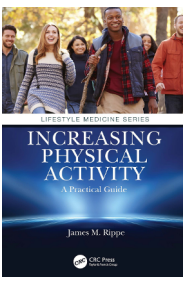

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LIVING MINDFULLY ACROSS THE LIFESPAN

An Intergenerational Guide

J. Kim Penberthy and J. Morgan Penberthy

ROUTLEDGE

3 Belief Is Half the Battle!

Self-Efficacy, Self-Esteem, Self-Confidence

Many of my psychotherapy patients who I work with professionally tell me that they have low self-esteem. They are not happy with themselves or their lives. Many feel that they are not living the life they wanted, and feel poorly equipped to make the life they wanted happen. Many have been told that they are worthless or defective most of their lives. Many have been told that they do not deserve happiness and find their current negative situation to be more evidence of this. Self-esteem, self-efficacy, and self-confidence are all important components of living a good life. In Chapter 1, we discussed self-worth and how it is related to, but different from, self-efficacy and self-esteem. Self-confidence is another term that is thrown around a lot in this literature. This jumble of 'self-terms' can be confusing and so we will start by defining how we are using these terms and how they are related. Then we will talk about how to improve them!

When we talk about *self-efficacy,* we think of it as a person's belief in their ability to accomplish some specific goal or task. It generally corresponds to how competent an individual feels. Competence can vary from one situation to another, and thus, self-efficacy is typically thought of as what we call 'domain-specific.' For example, you may be very clear that you are good at writing, and thus have high self-efficacy about your writing skills, but may feel like you have much less ability in physics, and thus experience low self-efficacy in solving physics problems. Your level of self-efficacy is dependent on what subject area you are talking about – it is 'domain-specific.' Here is the good news! Self-efficacy is also changeable and responsive to learning and feedback from the environment. You can gain self-efficacy through practice and intentional and unintentional learning and through other modifiers from the environment around you – such as what other people say to you about your skills and abilities! This is why thinking about growing self-efficacy intentionally, even in children and young people, is so important!

One of the most famous researchers in the area of self-efficacy is Dr. Albert Bandura, who is now an emeritus professor of Social Science in Psychology at Stanford University. He helped demonstrate how self-efficacy impacts not only how you feel about yourself but also how successful you might be. Assessing self-efficacy is a bit tricky because it can pertain to a person's perception of their ability to deal with various specific situations or their overall ability. Fortunately, there are different versions of assessments of both specific self-efficacy and general self-efficacy. The New General Self-Efficacy Scale by Chen, Gully, and Eden (2001) assesses general self-efficacy in adults. Bandura's General Self-Efficacy Scale assesses perceived self-efficacy as it pertains to adaptation abilities and coping for both stressful events and daily activities (Romppel et al., 2013). This self-efficacy measure is a good one to start with because it is based upon Dr. Bandura's social-cognitive theory and evaluates ten functional areas of life (Panc, Mihalcea, & Panc, 2012): Intellectual, Family, Education, Professional, Social, Religious, Erotic, Moral, Well-being, and Health.

There are multiple other kinds of assessments of specific self-efficacy, such as for interpersonal communications of healthcare professionals, academic performance, athletic performance, cultural competence, versions for children and adolescents, aging individuals, you name it and there is an assessment for it!

When it comes right down to it, our belief in our own ability to succeed plays a key role in how we think and how we feel. It also helps us establish our place in the world and can even determine what kind of goals we set and how we go about accomplishing those goals.

Self-esteem is the regard or respect that a person has for themselves. A person with positive feelings regarding the self is said to have high self-esteem, one with negative feelings about the self has low self-esteem. Self-esteem is generally conceptualized as uniquely personal and specific and based on each individuals' own experiences. It is also thought of as domain-specific, similar to self-efficacy. As you can imagine, it can be related to self-efficacy, but is generally not thought of as exactly the same thing. At the turn of the 20th century, William James, who is often thought of as the 'father of American psychology,' defined self-esteem as the degree to which people perceive their accomplishments as consistent with their goals and aspirations (James, 1983). This is an interesting definition because if you think about this, this means that someone can be wealthy, beautiful, or well-liked by others and still not feel good about themselves – still not have positive self-esteem. The way others perceive us doesn't define our own self-esteem – it's how we perceive ourselves that matters. In the mid-1980s, Dr. Morris Rosenberg, a social psychologist and professor of Sociology at the University of Maryland until his death in 1992, extended this definition by adding that self-esteem involves feelings of self-acceptance, self-liking, and self-respect

(Rosenberg et al., 1995). These definitions can be applied to both global and domain-specific self-esteem. Global self-esteem refers to an individual's overall evaluation of himself or herself. Domain-specific self-evaluations focus on a specific facet of the self, such as physical appearance or academic competence. Dr. Rosenberg also developed the most popular assessment of self-esteem called the Rosenberg Self-Esteem Scale, which is a 10-item self-administered test (Rosenberg, 1965) that provides an overall number indicative of your own perceived self-esteem.

Thus, while self-efficacy is focused on 'doing' – for example, feeling that you are capable of attempting to achieve something, self-esteem is based on 'being' – for example, feeling that you are perfectly acceptable just as you are right now. The 'father of the self-esteem movement' in the U.S.A. is psychotherapist Dr. Nathaniel Branden. He defined self-esteem as a relationship between a person's perceived competence and their sense of worthiness, especially in regard to how one handles the challenges of living (Branden, 1995). He defined positive self-esteem as experiencing yourself as competent to cope with the basic challenges of life and as worthy of happiness. Dr. Branden proposed that, while others (parents, teachers, friends) can nurture and support self-esteem in another person, self-esteem also relies upon various internally generated practices of the individual. Thus, he proposed that self-esteem is impacted by both others and the self.

Dr. Roy Baumeister, a professor at Queensland University in Australia is a social psychologist who has studied self-esteem for decades. Dr. Baumeister warns of the importance of not confusing self-esteem with self-confidence (Baumeister et al., 2003). 'Self-esteem is, literally, how favorably a person regards him or herself,' Baumeister writes. 'High self-esteem can mean confident and secure – but it can also mean conceited, arrogant, narcissistic, and egotistical' (Baumeister, 1996, p. 14). We can think of self-confidence as a kind of trust or assertion in yourself, believing in your own aptitude or ability either generally or in a specific area or domain. You might even think of self-confidence as self-assurance. Self-efficacy is positively related to self-confidence, but they are not the same thing; in the words of psychologist Albert Bandura, Ph.D., the originator of the theoretical construct of self-efficacy and of social cognitive therapy:

> Confidence is a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about… Perceived self-efficacy refers to belief in one's agentive capabilities, that one can produce given levels of attainment. (1997, p. 382)

Just as positive self-esteem can increase motivation; self-efficacy and confidence can work in a positive cycle: the more confident a person is in their abilities, the more likely they are to succeed, which provides

them with experiences to develop self-efficacy. This high self-efficacy, in turn, can increase confidence!

It is important to realize that in this area of research there are many related but slightly different terms and ideas and each one may have its own distinct body of research and findings that may or may not be related to other areas. Thus, you may need to explore multiple areas of research in order to have a comprehensive understanding of self-esteem, self-efficacy, and self-confidence (Mruk, 2006). The literature is vast in this domain and it can be challenging to translate findings from one researcher to another. With that caveat, there are a few general findings that seem to persist across time and cultures. Specifically, data appear to demonstrate that people worldwide tend to gain self-esteem as they grow older, and that men generally have higher levels of self-esteem than women. Although this self-esteem gender gap is more pronounced in Western industrialized countries, the general trend across all the countries suggests that gender and age differences in self-esteem are not a Western idiosyncrasy, but can be observed in different cultures across the world (Bleidorn et al., 2016). The hope is that as we learn more about what influences and shapes self-esteem and self-efficacy, we can better understand why women world-wide seem to have lower self-esteem than men across the lifespan. Then we can focus on improving our theories and more importantly, designing programs and interventions to promote or protect healthy self-esteem for us all!

Kim and Morgan's Story

I will never forget the mid-Spring afternoon I picked up Morgan from after-school when she was in third grade. She was quiet and her head was down. She was not her normal silly, happy, talkative self. She climbed into the car and sat in the back seat, looking down at her feet, and then once in a while glancing out the window. She looked tearful and sad. I waited a bit, after greeting her with a 'Hi Sweetie! How was your day? It is so good to see you!' She was quiet for a long time as we drove. Then she finally blurted out that she was going to fail third grade and started sobbing. I was dumbfounded, and pulled the car over into a parking lot. I stopped and climbed into the back seat with her and held her. Then I asked what this was all about. Morgan became less tearful and more obviously anxious. I told her it was all going to be OK, but asked again, why she thought she was going to fail third grade? I knew that her grades seemed to be fine and she was getting along well socially in school. She told me that her math teacher informed her that she was not good at math and that if she didn't improve, she would be held back. I was shocked. I was shocked not so much by the idea of her being held back, especially since she was young for her grade, but mainly I was shocked that a third grade teacher would say this to her! I saw the damage it did to her self-concept and her idea about her math abilities.

> Morgan did not fail third grade, but she did suffer regarding her own math skills, and would often indicate verbally that she 'was not good at math' and would stop trying to solve a math problem at the first frustration. Soon the statement that her teacher made became almost a self-fulfilling prophecy. Morgan had been told she was not good at math and so she became not good at math. Her imposed self-concept became a reality and she had low self-efficacy for math skills. I think her self-esteem suffered as well and I know that her self-confidence in her ability to do math plummeted. Although her father and I tried to help her understand that the ability to do math is a skill that can be learned and not a fixed trait, the damage had been done. I am still mad at that third grade teacher, and often wonder how many children, especially girls, have been shut down early by thoughtless teachers, tutors, and coaches who told them they are intrinsically not 'good' at something, like math or science or sports.

Interestingly, after this event, I began looking into research about self-esteem and children and found to my shock that for girls in the U.S.A., their self-esteem peaks when they are 9 years old, and steadily declines from there (Goodman et al., 2004)! I also discovered that there is a vast and varied body of research on self-esteem, self-efficacy, self-confidence, gender, ethnicity, body image, trauma, sports, education, intelligence, and on and on. The literature is expansive and confusing because of the variation of terms and concepts. The main theme was that these are very popular topics for psychologists and educators to study and for good reason – self-efficacy and self-esteem can have a huge impact on just about everything from psychological states to motivation to behavior. Our belief in our own ability to succeed plays a key role in how we think and how we feel now and in the future. It also helps us establish our place in the world and can even determine what kind of goals we set and how we go about accomplishing those goals.

Other themes from the literature support that if you have strong self-efficacy you may:

- View challenging problems as simply another task to be mastered
- Develop a deeper interest in the activities you participate in
- Form a stronger sense of commitment to your activities and interests and
- Recover more quickly when it comes to disappointments and setbacks

And if you have low self-efficacy you may:

- Avoid challenging tasks
- Believe that difficult tasks or situations are beyond your capability
- Focus on negative outcomes or personal failures and
- Lose confidence quickly in your personal abilities

Thus, understanding and cultivating your own healthy self-efficacy and self-esteem are important life goals!

Importance of Self-Efficacy

As we have stated, self-efficacy refers to your belief in your ability to complete the tasks required for achieving a particular goal (Bandura, 1997). Dr. Albert Bandura, a psychologist at Stanford University who helped develop the construct of self-efficacy, proposed that self-efficacy beliefs are the most powerful influence on a person's decision to begin and maintain a behavior. Self-efficacy determines how we think and feel about ourselves. It is a kind of confidence in ourselves that is different from pure ability. For example, I worked with a student who aspired to become an engineer, but she was not sure about her engineering or academic potentials. She put in the effort, worked hard, and did her very best, but at the end of the day, she was still unhappy because she lacked confidence in herself. When she succeeded, she attributed it to luck and when she did not do as well, it supported her doubt in herself. What she needed was to build her self-efficacy in order to increase her trust in herself.

Sense of self is generally thought of as a product of two interacting forces that can be described as nature and nurture. Nature is what we are born with and nurture is the influence of the environment around us, including other people. Early in life, our sense of our own self may be heavily influenced by our environment and by others as well as by our inherent personalities and traits. A great example of the impact of inborn personality early in life is the idea of the personality construct of agreeableness, which is one of the five major dimensions of personality structure according to many psychologists (McCrae & Costa, 2003). This dimension reflects pretty much what you would expect given its name. 'Agreeableness' refers to the level of individual differences in cooperation and social harmony. People who score high on this dimension are empathetic and altruistic, while a low agreeableness score relates to selfish behavior and a lack of empathy (Bamford & Davidson, 2017; Song & Shi, 2017).

The thing with inborn characteristics is that they work in concert with the environment, so that who you are then interacts with others in your social environment for better or worse. One example in my early life illustrates an interesting impact of these differences. During one Halloween, when I was very young – I think I was no more than 5 or 6 years old – my mother brought home two costumes for my younger sister and me to wear to go trick-or-treating. Our mother worked during the day as a nurse and my father was in his residency training for surgery which meant he worked all the time. Mom did not have time to get fancy with the costumes, so these were simple jumpsuit type things of solid color along with a paper face mask. We each got the suit that fit us – mine a bright cheerful yellow that came with a princess mask and hers a purple suit with a cat mask. I was thrilled and excited to trick or treat,

and started dancing around (something I frequently did as an expression of positive emotion!). My sister watched me, but instead of mirroring my enthusiasm, she was very unhappy. She pouted and told my mother that she wanted the princess mask! Mom was probably fatigued and wanting to just get on with it, so she asked me if I would switch with my sister. I said sure! I would love to be a cat! We swapped masks and I again began to dance around, but this time, like a cat! I looked over at my sister to meow at her, and she was still frowning. Turns out, being a cat didn't suit her either. She was going to be unhappy it seemed, no matter what. What my mother told me later, was that as an agreeable child, others were more supportive and engaging with me. She told me stories of how I was easy to be around, and thus, people approached me with opportunities, positive feedback, and friendship. Less agreeable children may elicit opposite reactions from others, and then may internalize those reactions and may miss out on growth experiences or positive relationships. The relationship of nature and nurture seems to augment and play off of each other – low agreeableness endears less support or positive feedback from the environment and high agreeableness grows support and encouragement and more agreeableness.

Thus, you can see how personality and sense of self can interact with the environment and impact self-efficacy, self-esteem, and self-confidence. Additionally, self-efficacy can interact with a sense of self. We know that increased self-efficacy enhances self-control. It impacts all aspects of human functioning – including social interactions, health, emotional well-being, and professional work. General self-efficacy affects how individuals react during times of stress exposure (Bavojdan, Towhidi, & Rahmati, 2011). General self-efficacy is defined as an individual's confidence in their ability to cope with stress and even appears to be related to a lower risk of mortality, although this may be true only for certain groups of people. For instance, low general self-efficacy does not appear to increase mortality risks for blacks but does for whites (Assari, 2017).

Self-efficacy influences our thoughts, emotions, actions, and motivation. We start contributing to our beliefs about our own self-efficacy in early childhood with experiences of ourselves, watching and learning from others, and being informed about ourselves by others' reactions to us. Positive feelings like autonomy, love, support, safety, and encouragement act as catalysts to our self-efficacy. Self-efficacy operates on how we think and feel and thus, plays a crucial role in shaping our view of life experiences. Many contemporary mental health interventions largely rely on promoting well-being by improving self-efficacy. Since self-efficacy affects almost every aspect of our well-being, many psychologists argue that it is vital to help people intentionally increase their self-efficacy. Bandura proposed that we can think of self-efficacy as having multiple sources that feed it – both internal to the person and external

to the person (Bandura, 1997). Internal forces that impact self-efficacy include our own internal resilience and experiences of trying and failing and trying and succeeding in a task, as well as becoming aware of our own emotional and physical state of mind. Learning lessons from watching others and modeling experiences of others are some of the external components that impact self-efficacy. Knowing what influences self-efficacy, allows us to generate ideas about how to increase it.

Building Self-Efficacy

According to Bandura (1977), there are four major sources that contribute to the development of self-efficacy beliefs:

- Performance accomplishments: This is the experience of mastery. Successful experiences lead to greater feelings of self-efficacy. However, failing to deal with a task or challenge can also undermine and weaken self-efficacy.
- Vicarious experience: Observing someone else perform a task or handle a situation can help you to perform the same task by imitation, and if you succeed in performing a task, you are likely to think that you will succeed as well, if the task is not too difficult. Observing people who are similar to yourself succeed will increase your beliefs that you can master a similar activity
- Verbal persuasion: When other people encourage and convince you to perform a task, you tend to believe that you are more capable of performing the task. Constructive feedback is important in maintaining a sense of efficacy and it may help overcome self-doubt
- Physiological states: Moods, emotions, physical reactions, and stress levels may influence how you feel about your personal abilities. If you are extremely nervous, you may begin to doubt and develop a weak sense of self-efficacy. If you are confident and feel no anxiety or nervousness you may experience a sense of excitement that fosters a great sense of self-efficacy. It is the way people interpret and evaluate emotional states that is important for how they develop self-efficacy beliefs. For this reason, being able to diminish or control anxiety may have a positive impact on self-efficacy beliefs

Self-efficacy beliefs begin to form in early childhood as the child deals with a variety of experiences, tasks, and situations. The development of self-efficacy beliefs continues throughout life as people learn, experience, and develop into more complex human beings. We may form perceptions about ourselves by comparing ourselves with others. However, research by Steyn and Mynhardt (2008) shows that the development of self-efficacy beliefs seems to be more influenced by mastery experiences than information formed by social comparisons. But, for

many people the mastery of performance (first on the list above) is the most challenging. For this reason, we will focus on helping to increase beliefs in the ability to set goals and achieve them! If we intentionally approach experiences with realistic goals in mind and clear intentions, we may be able to increase our self-efficacy.

Setting realistic and attainable goals is an important step in building self-efficacy. It cannot be emphasized enough how important it is to intentionally and proactively identify your goals! Many patients who I work with have low self-efficacy, depression, anxiety, and very unhappy and lonely lives because they have never thought about their goals. They live life merely reacting to others and thus, at the mercy of others – with no confidence in themselves and no self-efficacy. The first step to increasing self-efficacy is to give yourself permission to think about and set goals for yourself in the world. These can start off by being very pragmatic and straightforward goals like, 'I want to invite my friend to have coffee.' These goals need to be realistic and attainable, meaning that you can reasonably have control over them and that the environment is likely able to provide or produce the goal. For example, a goal of wanting to play piano like a concert pianist is not realistic if you do not know how to play the piano, but the goal of wanting to take piano lessons is realistic and most likely attainable. The goal of wanting other people to feel, think, or do specific things just because you want them to is also unrealistic and unattainable because we cannot make others feel, think, or do things. This goal is especially unrealistic if we are counting on other people to read our minds or know what we want. Even when we directly ask for what we want, we might not get the other person to do it. We do not have that kind of control over others. What we can control is what we do, think, say, and pay attention to. Thus, setting goals that are realistic and attainable and yet still meaningful and in line with your values is the first important step to building self-efficacy. You can set goals based on what you would like to do, what you are good at, or you can set goals that are new and challenging to you. You then work in a systematic way to gear your thoughts and interpretations as well as your behaviors toward achieving these goals. This is sometimes called 'means-end thinking' because you are focused on what it will take to facilitate achievement of the goal. You set a realistic goal, focus on what it takes to work toward that goal and often (but not always), you may find that you achieve it, and you will certainly increase your self-efficacy.

Means-end thinking in the education literature is described as the ability to orient oneself to and conceptualize the means of moving toward a goal (Beveridge & Goh, 1987). This ability is thought to develop in adolescence and is generally deemed necessary for adequate social adjustment. People who operate using means-end thinking have been shown to be more able to set and achieve interpersonal goals and be successful in their interpersonal interactions (Kleftaras, 2000). Interestingly,

means-end thinking is also an important aspect of intelligent behavior as studied in Artificial Intelligence (AI) where it is described as a kind of goal-based problem-solving skill, a framework in which the solution to a problem can be described by finding a sequence of actions that lead to a desirable goal. In AI, a goal-seeking system is connected to its outside environment by sensory channels through which it receives information about the environment and motor channels through which it acts on the environment. This is very similar to how means-end thinking is hypothesized to work in humans. A major problem is that many humans do not learn to operate this way. They never learn how to set relevant, realistic, attainable goals, or they learn that it is not OK to do so. In other words, they receive information from the environment and act on the environment, but do not have a priori realistic goals in mind. Thus, these individuals end up just reacting to things and people around them and essentially give their power away to others by being at the mercy of the environment and other people. Additionally, some people learn that they will be ridiculed, dissuaded, thwarted, or punished for setting goals. They learn that setting goals for themselves is not allowed or not safe or not possible. Others have never seen goals set by those around them, and thus, they do not learn to think about goal setting. They may operate day-to-day in a purely reactionary mode, reacting to their environment with little thought or effort regarding their own goals. These individuals will be at the mercy of the environment and those around them – which may ultimately result in no goal setting and a subsequent absence of self-efficacy.

An example of what can happen when you do not practice means-end thinking comes from a depressed female patient I worked with. Phyllis was a 58-year-old divorced baseball fan. During one group therapy session, Phyllis reported on a situation where she was invited to a work colleague's home to watch a baseball game on TV with a group of other people. Phyllis enjoyed baseball and was lonely and so accepted the invitation. She did not set a goal for herself and was very anxious on her way to her colleague's home. Phyllis almost turned around several times, but managed to get to the person's home and went up to the door. Her colleague, Tammy, greeted her and invited her in and they all sat to watch the game. Phyllis was still anxious and reported that in retrospect, she was not clear what to do or how long to stay and never thought about her goals or what she hoped to achieve. One man, Jake, asked her who she was cheering for and she let him know the team she hoped would win and he teased her about her team's losing streak. She felt her face flush and her confusion, embarrassment, and panic rise and she quickly left the room. Tammy came and found Phyllis and told her that Jake was like that with everyone – he was a joker and most people just ignored him or laughed it off – she said Jake was just teasing. Phyllis could not take this information in; she was feeling panicky and ended up slipping out of the

house after pretending to go to the restroom. She felt so ashamed after the episode that she never responded to her friend's follow-up calls, and lost a group of potential acquaintances and friends.

After Phyllis shared this story, the group discussed how she might have approached things differently using means-end thinking. We explored what a realistic and attainable goal might look like for her in this situation. Other group members helped her think about her goals and she also was reminded to think about her values. In other words, she was encouraged to think literally about what she wanted to do during the visit to her friend's home and to think about how it fit with her values – what was important to her. Ultimately, the group came up with several options, each dependent on the individual and their goals. Phyllis decided that she could have set an original goal of staying for a certain period of time, and we discussed how this may have changed after the comment from Jake. She was able to explore how she may have been able to set an additional goal to clarify with Jake what he meant, or to ignore Jake's comment, or to even laugh at Jake's comment. These were much more challenging ideas for her to consider, and she was not sure that she had the skills yet to pull them off, but she at least knew that there were other options for the situation. She also knew that having an anchor of a specific goal that she was trying to achieve would help her focus and that knowing her values and what is important to her would help guide how she achieved this goal. For example, she stated that leaving without saying goodbye did not fit with her values. She had felt badly about leaving without letting her friends know and this bothered her the most. Phyllis was eventually able to forgive herself because she understood more fully what happened in the situation and how having a goal in mind next time may help facilitate a more successful outcome.

Learning means-end thinking is a fabulous way to develop skills to help build self-efficacy. In means-ends analysis, the problem solver begins by envisioning the end, or ultimate goal, and then determines the best strategy for attaining the goal. As we have stated, the goal is more achievable if it is realistic and attainable. Means-end thinking is crucial for adequate social functioning and can be practiced in most interactions where goals are set. It is important ahead of time to think about and set realistic and attainable goals and evaluate if they need to change over time.

Focusing thoughts, emotions, and behaviors toward the achievement of these goals will really help facilitate achievement in a reliable manner. This does not mean that the goal is always met, but it does mean that the person has a clearly articulated goal for the specific situation and is actively generating and acting on components that will potentially help move them toward the goal. Thoughts, emotions, and behaviors that do not work toward these goals or are not relevant or helpful in moving toward these goals can be laid aside, and thus reduce

unnecessary emotional, behavioral, or interpersonal distractions or disruptions toward goal achievement. It is important to be clear about the goal and determine if it is something you have control over or not, as well as determine if this is the actual goal you want to focus on at this particular moment. If you do not have success in achieving the goal, or communication is not effective, you can then examine the goal and determine if it is really the goal that you want to pursue at this moment. Often people have goals that are not realistic, not attainable, or not appropriate for the specific situation, and this will cause difficulties. It is important to set goals for the situation that are appropriate. For example, for a surgeon, a goal of letting hospital administrators know how she is unhappy about the call schedule is not the most appropriate goal while she is actively in the middle of performing surgery on a patient, because her immediate goal is to perform a safe and effective surgery, but it may become an appropriate goal after the surgery is complete.

It can be easy to forget to set realistic or attainable goals in situations. In our busy, rushed world it can be especially easy to fall into a pattern of reacting to others instead of thoughtfully developing a realistic and relevant goal for yourself based on what is important to you. This puts an individual at risk for reacting to others instead of responding intentionally and working toward a valued and appropriate goal. People may set goals that are not realistic or attainable and these need to be acknowledged and revised. A helpful thing to do is to intentionally think about what your goal is prior to entering into an interaction and then explore in your own mind if this is something that you think you can control and that the environment can reasonably produce. If this is not the case, think about what is the next most important, urgent, and achievable goal in the situation and work toward that end. You can also think about your own values and what is important to you personally about the interaction or situation and use this information to help set your goals. In a later chapter, we will talk more about the important role of personal values and how to identify them if you do not already know what they are.

When you begin to operate in a fashion where you are intentionally setting realistic and attainable goals based on your values, and forming your interpretations, thoughts, and behaviors toward facilitating the achievement of these goals, and perhaps even achieving your goals and understanding your role in it – this is self-efficacy! Bingo! It feels good and can help increase your confidence and self-worth! In fact, the premise of this idea of means-end thinking informs a proven effective psychotherapy for persistent depression called Cognitive Behavioral Analysis System of Psychotherapy (CBASP), which was developed by clinical psychologist Dr. Jim McCullough, Jr., who also happens to have been the mentor of one of the authors of this book – Kim! This therapy helps promote what is termed 'perceived functionality' in the depressed

patient, significantly improving symptoms of depression (McCullough et al., 2015; Penberthy, 2019).

So, to summarize, below are steps you can use to implement means-end thinking and help improve your self-efficacy:

1. Set a relevant, realistic, and attainable goal
2. Check the goal against your values – does it fit with your values and your mission? If not, you may wish to re-evaluate your goal
3. Generate and gear your thoughts, interpretations, and behaviors toward facilitation of your goal
4. If a thought, feeling, or behavior does not help move toward the goal, set it aside and do not focus on it. It will still be there, but it does not help get to your goal
5. Focus on your goal and remind yourself of how your thoughts, interpretations, and behavior facilitate achievement of the goal and the values related to the goal
6. When and if you achieve your goal or get near it, own your part in making it happen
7. If you do not achieve your goal, you may wish to explore why, including asking yourself if the goal was realistic and attainable and if something else may have changed during the event, interaction, or situation
8. Regardless of the outcome, if you are clear about your goals and they are realistic and attainable and you understand your role in the event, then you have made progress by being intentional and adding to your learning

One of the most significant qualities of people with high self-efficacy is the power to look beyond short-term losses and not let such losses break their trust in themselves and their goals – this is called being resilient! Not achieving your goal can be a rich learning opportunity because it allows you to examine what part of the process did not help facilitate the goal, or if the goal was not realistic or attainable. In using the means-end approach you can also clarify your values and sort priorities, and this leads to making better plans, setting meaningful goals that fit with your values, and focusing on your goals more efficiently. A related practical psychological tool that you can use with means-end thinking to increase self-efficacy is to intentionally identify unhelpful thoughts, assumptions or other obstacles to your goals, and reframe or replace them with more adaptive interpretations. Reconstructing the way we look at failures can help change the way we think of ourselves. For example, a person with high self-efficacy is not likely to perceive a loss as a personal shortcoming. In the example of Phyllis, this might look like Phyllis responding to joking or rude comments with a clear idea that there

is nothing wrong with her. She might then think about what her goals and values are and set a goal to ask for clarification or a goal to let it go or a goal to be kind. She might try to cope with it and find ways to handle it positively. Building self-efficacy allows us to understand that challenges and failures are inevitable and that by continuing to believe in ourselves and our abilities, we work toward our goals and attain fulfillment anyway.

Building Self-Esteem

Self-esteem is the regard we have for ourselves and as we mentioned, it is a bit different than self-efficacy. It is being pleased with or comfortable with yourself as you are. Both self-efficacy and self-esteem have been extensively studied, and one of the clinicians who has done a good deal of this work is Dr. Nathaniel Branden. He has built a career studying self-esteem and strategies to help increase it. Dr. Branden distinguishes his approach to self-esteem from that of others by his inclusion of both confidence and worth in his definition of self-esteem. In the mid-1990s, he developed a framework of six 'pillars' of self-esteem (Branden,1995). As you recall, self-esteem differs from self-efficacy in that it is focused on 'being' and less on 'doing.' Thus, it is less connected to achievement of goals. The first pillar according to Dr. Branden is living consciously – that is being in the moment and being mindful. In his books on growing self-esteem, Dr. Branden also describes the necessity of self-acceptance, self-responsibility, and self-assertiveness practices as well as something quite familiar to the reader by now – the importance of setting goals and developing a plan of action to achieve the goals. Finally, he proposes that the sixth pillar is personal integrity – similar to what we might think of as living your values. Dr. Branden thinks of self-esteem as an active practice and states that what determines the level of self-esteem is what the individual does. Thus, in his writings and his work as a psychotherapist, he proposes active exercises people can do to address each of the pillars. He focuses a great deal on a written practice called 'sentence-completion' to promote conscious, mindful living, and increase self-understanding. The sentence-completion exercise is deceptively simple, yet uniquely powerful in raising self-understanding, self-esteem, and personal effectiveness according to Dr. Branden. This exercise rests on the premise that all of us have more knowledge than we normally are aware of, more wisdom than we use, and more potential than typically shows up in our behavior. Branden proposes that sentence completion is a tool for accessing and activating these 'hidden resources.' The basic idea is that you have a sentence stem like 'Living mindfully to me means …' and you then create several completions of that sentence. The only rule is that each ending needs to create a sentence.

You may want to give this a try yourself with different sentence stems that seem pertinent. Some examples may be:

- If I could accept myself, then…
- The feeling of responsibility makes me…
- If I let others know how I feel…
- If I was kinder to myself…

You can see how you can create sentences for each of the six pillars that are specific to you and your current situation. This allows for people to work on multiple pillars simultaneously. Overall, Dr. Branden promotes that active practices of mindfulness, self-acceptance, and ownership in the form of self-responsibility for choices and actions lead to increased self-esteem. He also promotes the active practice of self-assertiveness with a focus on being authentic and real and equates this pillar to self-actualization. Branden's fifth pillar of living purposefully is very similar to the idea of means-end thinking with a focus on setting goals that resonate with your values and ideals and thinking about what it will take to achieve those goals. Finally, Dr. Branden proposes that without personal integrity, all other practices will fail. He describes integrity as an integration of ideals, convictions, standards, values, and behavior and states that when our behavior matches these values, this is integrity. These intentional practices lead to increased self-esteem according to Dr. Branden (1995).

Additional Research

Research shows that self-efficacy beliefs are associated with beneficial aspects of human functioning. The belief that one can control stressful events is related to emotional well-being, successful coping, positive health behaviors, better performance on cognitive tasks, and good health. Self-efficacy beliefs have even been linked to a lower risk of mortality (Taylor, 2011). There are numerous research studies showing that self-efficacy beliefs help determine whether people choose to attempt certain tasks, how they attempt the tasks, and how they cope with challenges arising from trying to complete the task – that is the degree of anxiety and frustration they experience in the process.

Poor self-efficacy beliefs have been found related to clinical problems such as phobias (Bandura, 1983), addiction (Marlat et al., 1995), depression (Davis & Yates, 1982), social skills (Moe & Zeiss, 1982), assertiveness (Lee, 1984); to stress in a variety of contexts (Jerusalem & Mittag, 1995); to smoking behavior (Garcia et al., 1990); to pain control (Manning & Wright, 1983); to health (O'Leary, 1985); and to athletic performance (Barling & Abel, 1983). For example, researchers Pajares and Urdan (2006) showed that self-efficacy predicts academic performance in

adolescents, and Brown and Lent (2006) demonstrated that self-efficacy predicts students' college major and career choices. In their 2008 review of the literature since 1977 on the sources of self-efficacy in school, Usher and Pajares (2008) observed that self-efficacy is 'associated with key motivational constructs such as causal attributions, self-concept, optimism, achievement goal orientation, academic help-seeking, anxiety, and value' (p. 751).

Research suggests that academic performance in general is related to one's perceived self-efficacy. Tuckman and Sexton (1992) suggest that students with higher self-efficacy are better at searching for new solutions and are more persistent at working on difficult tasks, whereas people with low self-efficacy give up more easily when dealing with difficult tasks and cannot concentrate on tasks as well. These patterns of behavior, if they continue, lead to the development of different levels of actual ability, which results in increased levels of achievement. Self-efficacy affects every area of human endeavor. By determining the beliefs a person holds regarding their power to affect situations, it strongly influences both the power a person actually has to face challenges competently and the choices a person makes.

Low self-efficacy beliefs and low self-esteem are serious issues that can have significant and long-term negative effects on a person's life. So, please, please, please take steps today and every day to strengthen your belief in yourself! You can also take daily action to help improve the self-esteem of your loved ones. If you already have a strong belief in your ability, remind yourself that you can do it. If you're uncertain about your capacity for success, tell yourself that you can do it. If you're positive that there is no way you could achieve the goal you set for yourself or overcome the obstacle in your path, give yourself a stern but encouraging pep talk ('You can do it!'). We know that a person's belief in their own abilities is a strong predictor of motivation, effort expended, and success; there is no downside to encouraging yourself, and working on believing in yourself. As Henry Ford is credited with saying, 'Whether you think you can or you can't – you're right.' So what happens when we think that we can?

Morgan's Story

I don't remember a whole lot about the day that my third grade teacher told me I'd be held back because of my poor performance in math class, but I do remember regularly telling myself after that moment that I was stupid and that there was no point in trying to understand or master math as a subject. Instead of tackling math head-on, I wanted to delve deeper into other topics that I felt I was good at – things like English

and history and art – and excel in those areas to the best of my ability. Thankfully, I have a supportive (and rather stern) mother, who insisted that I learn math and was willing to do anything she could to help boost my self-confidence in my mathematical abilities. With the help of her and my father's support, hours spent with my math tutor, and positive self-talk around my ability to do well in math, I not only made it through third grade – I even made my way through advanced research methods and statistics classes to earn a bachelor's degree in psychology! While I was able to work through and conquer this belief that I was bad at math, my battle with self-confidence and efficacy are never truly over, and there have been many instances in which I've struggled to embrace self-confidence.

For example, while co-writing this book, I also held down a full-time job and spent the remaining hours of my time outside of work studying for the GRE for admission into graduate school. I selected a GRE study program that was heavily focused on math since I had been out of college for a few years, and felt that a re-introduction to some of the basic academic mathematical concepts might help to boost my score on the math section of the test. One Sunday morning, I had spent about an hour studying the verbal sections. Once I flipped to the next section, a pop quiz appeared on some of the math principles we'd covered earlier in the module. I felt so frustrated when I took a longer time to understand and answer the questions and ended up getting many of them incorrect! Flustered and disheartened, I began questioning my ability to understand and perform well in the math sections. I felt that I wasn't smart enough to do the math questions correctly, which tempted me to simply give up and give in to my belief that I was never destined to perform well on math exercises.

Right when I felt like completely giving up on learning these concepts, I took a few deep breaths and reminded myself that this was just *one moment* – a moment in which I could choose to believe the false idea that I'm terminally bad at math or to believe in my ability to persevere. Never one to back out of a challenge, I chose to believe in myself. I reminded myself that I am not terminally bad at math and gently took a step back from the math quiz, focusing on what I am able to do and how I can control my reactions and beliefs about my math abilities. I took a walk, had some food and coffee, and called my mom (three things that will almost always make me feel calmer). I reminded myself that I am capable of anything and that my aversion to math and quick angry reactions were simply manifestations of my long-held belief that I'm intrinsically not smart enough to perform well in math, which in part stem from those biting words from my third grade teacher. I didn't have to latch on to them then, and I still don't have to latch on to them now – I choose to believe in my abilities to learn and grow and to dismantle the belief that I can't be better at math. Even on my most difficult days, like that one Sunday, I can choose to believe in myself and establish self-efficacy – and you can, too!

What You Can Do Now

To enhance your own self-efficacy, focus on ensuring that you have the opportunities you need to master difficult skills and complete challenging tasks. You can do this by setting goals and approaching them – find positive role models, listen to the encouraging and motivating people in your life, and take care of your own mental health.

According to Bandura, you develop your self-efficacy beliefs based on how you interpret input that you receive from four sources: mastery of experiences, modeling behavior, verbal persuasion, and physiological factors. This means that if you want to increase your self-efficacy beliefs in any area, you need to find a way to work within these four areas. Below are some strategies recapped in each domain.

Performance Accomplishments/Mastery Experiences

- This is the experience of mastery. This is one of the most powerful areas you can intentionally impact. You can use your means-end thinking previously described to build up these experiences
- As part of your means-end thinking, you can set goals that have an element of challenge in them but that are also realistic and attainable
- You can also set smaller goals for yourself and work your way up slowly, especially if you have beliefs related to past failures. Make sure to recognize and celebrate even small successes
- Remember that setbacks are normal and be kind and compassionate toward yourself
- You can also think of your past successes. Remembering how you achieved something that you at first thought was difficult can be helpful

Vicarious Experience

- This is learning by observing someone else perform a task or handle a situation. Watching someone else can help you to perform the same task by imitation. Observing people succeed will increase your beliefs that you can master a similar activity
- An interesting finding in the research is that for this to work, you need to perceive that the people whom you see succeeding in achieving the goal that you're after are similar to you (Bandura, 1997). They can be friends, family, or even someone who you do not know, but they need to be someone comparable to you – like a role model. In other words, watching a world class chess master play chess will not help increase chess-playing self-efficacy for someone who knows nothing about the game. The idea is to find someone who will make you think that if they can do it, so can you

Verbal Persuasion

- This is when other people encourage or convince you to try something. When other people encourage and convince you to perform a task, you tend to believe that you are more capable of performing the task. Constructive feedback is important in maintaining a sense of efficacy and it may help overcome self-doubt
- You want to be around people who will encourage you to go after your dreams and who will cheer you on as you strive to achieve your goals. You need cheerleaders who can also provide constructive feedback
- You want to avoid people who tell you that you cannot achieve your goals or that you should not try things. These kinds of people will have a negative impact on your self-efficacy
- If you don't currently have a supportive network of positive and encouraging people in your life, then try reading daily affirmations and journaling to remind yourself that you can succeed. There are many sources of positive reflections and daily devotionals with inspirational readings! Use these

Physiological and Emotional States

- These are the physical reactions, stress, and associated emotions that influence how you feel about your personal abilities
- The emotional state that you're in when it's time to act on your goals will affect your self-efficacy
- It is important to recognize this and control what you can about this. You may not be able to control a fast beating heart when you try something challenging, but you can control what you tell yourself about that physiological reaction. Instead of interpreting it as a negative or frightening thing, you can interpret it as a sign of excitement at the prospect of stepping outside of your comfort zone. This excitement will encourage us to keep moving forward
- Positive moods increase feelings of self-efficacy, while negative moods reduce it. Strive to put yourself in moods that will boost your self-efficacy by managing stress, and by talking yourself through any discomfort you may feel as you strive to achieve your goals. If you suffer from physical or mental illness, take action to address it and seek help! Taking care of your physical and mental illness will help increase your self-efficacy

What You Can Do to Help a Young Person

If you have a young person in your life, you have a wonderful opportunity to help increase their self-efficacy beliefs and potentially help them increase their self-esteem, confidence and live a successful life!

- Identify realistic goals and work toward mastering them. You can use the means-end thinking with children to help them link their efforts and intentions to the outcomes in order to increase the feeling of mastery. A sense of mastery is when a child truly feels they grasp the subject or task at hand. It happens when a child equates success to something they can control. For example, they may think, 'I got a good grade on my test because I studied hard,' or 'I did not get a good grade on the test because I did not study.' Mastery reinforces stronger self-efficacy beliefs. In contrast, a child does not develop a sense of mastery when they equate success to something that is out of their control. Thus, helping the child set goals that are realistic and that they can influence and helping the child link their efforts to the outcomes is a very powerful way to increase their self-efficacy beliefs. Ideally, tasks need to be challenging enough to keep the child's interest, but not so difficult that they become frustrating. Overcoming smaller challenges builds a child's resilience when encountering more challenging tasks; instead of feeling anxious, the child is more likely to persist
- Provide vicarious experiences. You can model how to construct a goal during a task, and approach it systematically. Don't forget that social learning theory proposes that children and young people learn a great deal via observation – so remember to provide positive examples! You can model a task for a young person in your life and provide a wonderful and positive learning experience to help increase their self-efficacy beliefs
- Praise efforts instead of ability. Giving messages about a child's capabilities and skills to handle challenging tasks greatly influence a child's willingness to persist during setbacks. Verbal encouragement is most helpful when it is focused on the efforts of the young person and are specific. Empty self-esteem boosters like 'You can do anything!' do not promote self-efficacy. In fact, the results of a large-scale study (Margolis & McCabe, 2006) showed that 'ability' praises such as 'You are intelligent' actually induced a fear of failure, causing children to avoid challenging situations. Praising ability undermined both motivation and performance. In contrast, children in the study who were praised for effort and encouraged to try regardless of the outcome, demonstrated more effort and increased self-efficacy

Exercises to Increase Self-Efficacy

Recognizing Your Effort

When practicing building self-efficacy, it may be tempting to start thinking about what you feel like you can – or can't – do. This is something commonly seen in yoga practice, and especially in beginners. For example, if you're a beginner yogi, you may have a goal of mastering

Padangusthasana, or Big Toe Pose, which is expressed by folding forward and holding the big toes with the pointer finger and thumb. It may feel easy for you to tell yourself, 'I can't do that – I'm not flexible enough,' or, 'I can bend forward, so I'll ace this pose!' Neither of these approaches will benefit you because they focus on ability, not effort. If you assume automatically that you will be 'good' or 'bad' at something and base your goals on your perceived ability, you'll limit yourself – instead of practicing gentle curiosity, and you'll quit before you've even tried! Instead of approaching the goal with an ability-focused lens, try approaching it with gentle curiosity. Ask yourself, 'Let's see how this goes if I try.' Try focusing on the effort you can put in to reach your goal – that way, whether you fully express the pose on your first try or your 47th class, you'll be able to recognize the effort you put in. Follow the below steps to practice this gentle curiosity:

1 Think about a goal you have in mind. Keep it specific and realistic. This can be anything you want to achieve! (Examples: Play 'Yankee Doodle' on the guitar or floss teeth once a day)
2 Write your goal down somewhere you'll see every day. This can be on a sticky note on your mirror, in a daily journal, or even a note or reminder on your phone
3 Practice your goal regularly by telling yourself, 'Let's just see what happens if I try.' If you make a mistake or forget to follow through regularly, think of the effort you have put in thus far, instead of how far along you are in your goal achievement. Reminding yourself of the effort – how you've tried – will feel rewarding

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How to Maximise EMOTIONAL WELLBEING and IMPROVE MENTAL HEALTH

The Essential Guide to Establishing a Whole-School Ethos

RONA TUTT and PAUL WILLIAMS

ROUTLEDGE

Chapter 6

Creating a healthy ethos and environment

The previous chapter looked at the current curriculum, which, despite the difficulties of having too much prescription and a surfeit of rigorous assessment, has taken a step forward in giving greater focus to the importance of both physical and mental health. This chapter is concerned with how to create an environment, both inside and outside an educational setting, which is conducive to supporting the wellbeing of all who learn and work there.

Establishing the right ethos

A document referred to earlier in this book, which was commissioned by PHE and written on behalf of the Children and Young People's Mental Health Coalition (CYPMHC), sets out eight principles that can be used to promote the emotional health and wellbeing of students in schools and colleges (Public Health England, 2015).

Eight principles for promoting emotional health and wellbeing

After recognising that the principles build on what many schools and colleges are already doing, each chapter investigates one of the eight principles and poses a key question. In essence, the key questions and chapter contents can be summarised as follows:

1 Leadership and management

> How is the school or college providing visible senior leadership for emotional health and wellbeing?

Leadership and management is seen as the central tenet, around which the other principles revolve. The use of the word 'visible' is important, as it makes it clear that, while everyone must be involved in giving emotional wellbeing the prominence it deserves, it is very hard to make an impact without the support and backing of the SLT.

2 School ethos and environment

> How does the school or college's culture promote respect and value diversity?

This refers to the physical, social and emotional environment in which staff and students spend much of the week and which will affect their physical and emotional wellbeing. Critical for this are the relationships between staff, and between staff and students.

3 Curriculum, teaching and learning

> What focus is given within the curriculum to social and emotional learning and promoting personal resilience, and how is learning assessed?

Written before health education became a compulsory subject, this highlights the importance of using the PSHE curriculum and other opportunities to promote resilience and support social and emotional learning (as illustrated in previous chapters).

4 Student voice

> How does the school or college ensure all students have the opportunity to express their views and influence decisions?

Involving students in making the decisions that affect them is known to have a positive impact on their emotional health. In addition to recognising this to be the case, there need to be mechanisms in place to ensure that students' views can and do have an impact.

5 Staff development, health and wellbeing

> How are staff supported in relation to their own health and wellbeing and able to support student wellbeing?

An integral principle of a whole-school approach is that staff are supported as well as students, both through SLT making sure workloads are as manageable as possible and through staff being able to access support. In addition, they need to have opportunities to increase their understanding of young people's mental health issues through ongoing access to training.

6 Identifying need and monitoring impact

> How does the school or college assess the needs of students and the impact of interventions to improve wellbeing?

This covers assessment tools, such as the SDQ mentioned previously, as a basis for assessing mental health needs and knowing what kind of support students

need. Also mentioned are: the Stirling Children's Wellbeing Scale, developed by the Stirling EPS, and the Warwick-Edinburgh Mental Wellbeing Scale (https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/).

7 Working with parents/ carers

> How does the school or college work in partnership with parents and carers to promote emotional health and wellbeing?

As the family is fundamental to a young person's wellbeing, it is suggested that, in addition to working in partnership with families in terms of involving them in their child's education and more generally in the life of the school, providing or signposting support for parenting skills and understanding emotional wellbeing will be beneficial to everyone.

8 Targeted support

> How does the school or college ensure timely and effective identification of students who would benefit from targeted support and ensure appropriate referral to support services?

The final principle concentrates on young learners who are more likely to need targeted support, such as those who are in care, those who are themselves young carers, and those living in households that are not conducive to their wellbeing. Early identification and getting them the support they need is seen as improving their chances of overcoming any difficulties. The AcSEED Award is mentioned as having been founded by young people who have experienced mental illness and is presented to schools which have made a significant effort to support the mental health of their students.

In summary, the eight principles might be said to be about how the right ethos and environment stems from the way the setting is led and managed. This includes:

- How the learning in the school promotes resilience and emotional learning
- How the wellbeing of staff, students and their families is addressed
- How students' needs are identified and targeted support is sought

Having had that broad focus on getting the right overall ethos and environment in which mental health and wellbeing can flourish, the next approaches look more specifically at wellbeing, beginning with the eight wellbeing factors that make up the approach to wellbeing in Scotland.

Getting it right for every child (GIRFEC)

Since 2006, the Scottish Government has developed an approach which encourages partnership working between families and those who work with

them (Scottish Government, 2006). Known as 'Getting it right for every child' (GIRFEC) the approach is based on children's rights and reflects the UNCRC, which has been mentioned elsewhere in this book. In addition, it is also concerned with the rights of parents, as stated in the European Convention on the Exercise of Children's Rights (Council of Europe, 1996).

The GIRFEC approach has been tested and developed across Scotland to be:

- Child-focused
- Based on an understanding of the wellbeing of a child in their current situation
- Based on tackling needs early
- Requiring joined-up working

Within the wellbeing theme, there are eight wellbeing factors which support children and young people so that they can grow up feeling loved, safe and respected and can realise their full potential. These eight factors are often referred to by their initial letters – SHANARRI. They can be used as wellbeing indicators, which make it easier for children, families and the people working with them to discuss how a child or young person is doing at a given point in time and to highlight if there is a need for support. It is accepted that there is no set level of wellbeing that children should achieve, as every child will be influenced by individual experiences and changing needs as they grow older. These factors are used across the services that work with children and families.

SHANARRI is illustrated by a wheel, at the centre of which is the need to give every child the 'Best start in life: Ready to succeed'. Around the edge of the wheel are the terms: confident individuals, effective contributors, responsible citizens, successful learners. The eight factors, which flow from the central tenet, are depicted as segments of the wheel. Schools in Scotland make use of the SHANARRI wellbeing indicators to assess the overall wellbeing of a child using these descriptors:

***S* – SAFE**	Protected from abuse, neglect or harm at school, at home and in the community
***H* – HEALTHY**	Having the highest attainable standards in physical and mental health, as well as access to health care. This also includes support in making healthy and safe choices
***A* – ACHIEVING**	Being supported and guided in their learning and in the development of their skills, confidence and self-esteem – at home, at school and in the community
***N* – NURTURED**	Having a nurturing place to live, in a family setting with additional help as needed
***A* – ACTIVE**	Having opportunities to take part in activities such as play, recreation and sport. This contributes to healthy growth and development at home and in the community

***R* – RESPECTED**	Having the opportunity to be heard and involved in the decisions that affect them
***R* – RESPONSIBLE**	Having opportunities and encouragement to play active roles in their school and community
***I* – INCLUDED**	Having opportunities to overcome social, educational, physical and economic inequalities and being accepted in the community in which they live and learn

An example of a school using SHANARRI is Baltasound Junior High School the most northerly school in the UK on the Island of Unst in the Shetland Islands. Despite its small size and its remoteness, the island is full of interest and activities for its inhabitants. Among many other features, there are two nature reserves, one of which is home to 25,000 pairs of puffins each summer; a heritage centre, prehistoric standing stones and Viking houses; a boat museum and a leisure centre with a swimming pool; and clubs for sailing, rowing, football, netball, badminton, squash and many other sports.

Figure 6.1 SHANARRI Wheel (www.gov.scot/publications)

The school is as far north as southern Greenland and the nearest city is Bergen in Norway. To reach Lerwick, the main town in the Shetland Islands, entails a two-hour journey on two ferries. The head teacher of Baltasound School is Paul Thomson, who, like many others on the island, has to take on additional roles. In his case he is also a firefighter with the Scottish Fire and Rescue Service.

Case study Baltasound Junior High School

This school has classes for nursery children through to secondary students who can stay until they are 16. When they leave, they may move on to Anderson High School or Shetland College, or into employment. The school is very much part of the island community with students, staff and parents all working closely together. The school has both a Pupil Council and a Parent Council.

The school's core themes and values are:

- Our community and volunteering
- Outdoors and the environment
- Opportunities for everyone
- Celebrating what makes us unique

At the centre of a diagrammatic model of the school curriculum the eight factors of SHANARRI are set out in the centre, illustrating how these principles are central to all areas of the school's work.

Health and wellbeing has an important place in the curriculum. It encompasses physical, mental, emotional and social wellbeing and aims to enable students to establish a pattern of health and wellbeing that will be sustained into adult life. Each term there is a focus on an area of health and wellbeing, such as healthy eating or physical exercise (including the daily mile for primary classes), which becomes a focus throughout the school. Full use is also made of the variety of terrains, from sandy beaches to soaring cliffs.

Paul points out that the school may be small and in a far-flung corner of the UK, but that does not limit his ambition for his students. In the entrance to the school are photographs of former students and what they went on to do. Paul says:

> In recent years we have had examples of professional sportspeople (representing Scotland at the Commonwealth Games), geologists, teachers, volunteers in the 3rd sector, quantity surveyors and more. This matches our

> school motto and the fact that we can do anything and be anyone. Being rural and remote does not hold us back, far from it – it's what makes us unique and we are proud to celebrate that.

Although on the small side for the age range it covers and being cut off from the facilities of less isolated school settings, here is an example of how a school has turned its location into an advantage and offered a curriculum that has encouraged pupils to take the direction that suits them.

Digital 5 A Day

There have been many references throughout this book to the NHS 'Five steps/ways to wellbeing' (NHS, 2020), which, in common with SHANARRI, goes across the services working with children and young people. More recently, the NHS has added some 'do nots' to the first three of the five steps people should take. In short, the suggestions are:

1	Connect with other people,	but do not rely on technology and social media alone to build relationships
2	Be physically active,	but do not feel you have to spend hours in the gym.
3	Learn new skills	but do not feel this means taking new qualifications or exams.

Along similar lines, the Children's Commissioner for England, Anne Longfield, produced a digital version, which is primarily a guide for parents. Its aim is to show them how they can help their children enjoy the benefits of the online world, without, as she explains, being totally consumed by it. Longfield says:

> Taken as a whole, and supplemented with parents own ideas about what they want for their children, I hope the '5 A Day' will be at the very least a starting point for parents to tackle one of the modern parenting world's newest and biggest dilemmas and help children to lead the way as active digital citizens.
>
> (Children's Commissioner for England, 2017)

Here are her suggestions:

1	*Connect*	Use the internet to stay connected to friends and family members, and to socialise safely
2	*Be active*	Make use of online resources to get moving and boost emotional wellbeing
3	*Get creative*	Use digital tools to learn, build new skills and discover new passions

4	*Give to others*	Stay positive and support others throughout the digital day
5	*Be mindful*	If parents are feeling worried by coronavirus, a children's guide to the virus helps explain the situation

Another variation has been to look at happiness rather than wellbeing, where ten keys, rather than five steps, have been identified.

Ten steps towards school staff wellbeing

These come from the Anna Freud National Centre for Children and Families. As mentioned in the previous chapter, it is no good concentrating on pupils' wellbeing without thinking about the wellbeing of staff. The ten steps come in the form of ten questions, which have been summarised as follows:

1. Is there a mental health lead for staff?
2. Is there a mental health policy addressing the needs of staff?
3. How does the ethos of the school promote openness about mental wellbeing?
4. Are there opportunities for supervision to support staff in taking decisions about pupils' mental health?
5. Do staff know how to access supervision outside the line management structure?
6. Could measures be trialled to reduce workload and does the SLT lead by example in, for example, limiting emails out of hours?
7. Is there a dedicated area where staff can take time out if needed?
8. Are there opportunities for staff to participate in activities with colleagues which are not linked to their work?
9. Is it feasible to introduce a staff wellbeing survey?
10. Is the mental wellbeing of staff an agenda item at staff and governor meetings?

Ten keys to happier living

The idea of identifying '10 Keys to Happier Living' comes from 'Action for Happiness', which is a charity that describes itself as a movement of people committed to building a happier and more caring society, where people care less about what they can get for themselves and more about the happiness of others. It says it has no religious, political or commercial affiliations. It was founded in 2010 by three people: Lord Richard Layard, Professor of Economics at the London School of Economics and author of books on the subject; Geoff Mulgan, who co-chairs a World Economic Forum group looking at innovation and entrepreneurship in the fourth industrial revolution; and Sir Anthony Seldon, whose work on introducing Happiness Lessons at Wellington College was mentioned earlier. The patron is the Dalai Lama, who describes living more

compassionately and putting the happiness of others at the centre of our lives, as 'the path to peace and happiness' (see 'Action for Happiness' (2010) website under 'Our Patron').

The first five keys are based on the Five steps to wellbeing and are said to be about how we interact with the outside world in our daily activities. Put in a different order, they spell out the word 'GREAT'.

*G*iving	Do things for others
*R*elating	Connect with people
*E*xercising	Taking care of your body
*A*wareness	Live life mindfully
*T*rying out	Keep learning new things

The second five keys are described as coming from inside us and depend on our attitude to life. They spell out the word '**DREAM**'.

*D*irection	Have goals to look forward to
*R*esilience	Find ways to bounce back
*E*motions	Look for what's good
*A*cceptance	Be comfortable with who you are
*M*eaning	Be part of something bigger

According to 'Action for Happiness', our genes influence about 50% of the variation in our personal happiness; our circumstances, (such as income and environment) affect only about 10%. This means that as much as 40% is accounted for by our daily activities and the conscious choices we make. In other words, our actions really can make a difference. 'Action for Happiness' has associated non-profit partner organisations in Australia, Germany, Italy and Czech Republic. All these ideas about how to improve emotional wellbeing and happiness have much in common and, between them, they give some clear pointers about the ethos educational settings might provide.

Creating the right environment

Moving on from the ethos needed to create the right environment for good mental health and emotional wellbeing, there is the question of providing the right physical environment as well. The next case study is a school in Wales which had the opportunity to create a purpose-built environment.

Case study of Ysgol y Deri

Ysgol y Deri is part of the Penarth Learning Community in the Vale of Glamorgan, Wales. It was built as part of the twenty-first-century-schools investment programme. It brings together on one site St Cyres Comprehensive School;

Ysgol y Deri, a special school; and Ty Deri, a small respite and residential provision. Chris Britten, the head teacher, describes his pupils as being 'differently able' and the staff he employs as having a 'can do' attitude in order to meet the wide range of needs of pupils aged 3 to 19. These include pupils with profound and multiple learning difficulties (PMLD) through to those who have a diagnosis of Asperger's syndrome and are working towards GCSEs and A levels, but whose exceptionally high levels of anxiety have been a barrier to learning in their local schools.

The school uses 'positive behaviour management', which moves away from a negative, punitive approach, and 'functional behaviour analysis', which is another way of looking at the adjustments that can be made to produce a change in behaviour rather than being confrontational. In line with trauma-informed schools holding the TISUK award, the school sees positive relationships and connectedness as essential prerequisites for enabling children to learn. (TISUK's training is highlighted in the DfE (2018) advice on mental health and behaviour in schools, as supporting and promoting positive mental health.) For measuring both pupils' wellbeing and engagement during some activities, the 'Leuven 5 point scale' is used. This was developed at the Research Centre for Experimental Education at Leuven University in Belgium and is used in the UK, particularly for children at an early developmental stage.

Case study Ysgol y Deri

The school is underpinned by a range of interventions that ensure pupils are regulated and 'ready to learn'.

The school has a Behaviour Support Team, where the emphasis is on *support*. In addition, a number of ELSAs deliver both group and one-to-one sessions. ELSAs receive intensive training from EPs to support a whole range of emotional needs in the school, including:

- Emotional awareness
- Self-esteem
- Anger management
- Social and friendship skills
- Loss and bereavement

The school recognises that pupils learn better when they are happier and their emotional needs are being met, and ELSAs are a key part of this. Learning coaches help pupils to choose appropriate pathways and assist in transitions between Key Stages and also between school and FE.

A sensory approach to learning is fundamental for many pupils, in order to help them make sense of the world. The sensory curriculum includes activities that develop vision, hearing, touch, taste, smell and movement/balance, either in isolation or as part of a multi-sensory approach. The occupational therapists (OTs) produce 'sensory profiles' for many pupils, particularly for those who have autism.

Due to the very wide range of pupils at the school, and being very conscious of the need to foster their emotional wellbeing, the school uses a wide range of approaches and interventions.

The school's Intervention Programme runs out of the Launch Pad room and works in conjunction with the Behaviour Support Team, class teachers, occupational therapists (OTs) speech and language therapists (SaLTs), play therapists and music therapists to provide pupils with the skills needed to re-engage with their education. An Intervention Panel meets every half-term to assess progress, prioritise new referrals and to plan the interventions for each pupil. These may be for short sessions or for day-long experiences, when a range of activities is designed to build confidence and self-esteem. In addition to those listed previously, other interventions include:

Aromatherapy	Massaging the hands and/ or feet using essential oils is known to have a calming effect
Immersive environment	This uses virtual reality, as in Star Trek's 'Holodeck'
Magic carpet	This device from Poland is an interactive projection tool which can be used on the floor or table
Rebound therapy	Internationally recognised, it was founded in the 1970s as a specific model of trampoline therapy, as opposed to using the trampoline for physical sequences of increasing complexity. It combines therapeutic exercise with enjoyment and is taught by those who have been trained by accredited providers
Touch Therapy	The school is known as a Centre of Excellence in Touch Therapy and many of the staff have been trained to deliver sessions in the school's Touch Therapy room, which has an integrated sound and light system. This pioneering therapy gives pupils opportunities for relaxation, positive communication, empathy and wellbeing and uses all the senses to establish a sense of worth and enjoyment
Yoga	Regular yoga practice gently rests the nervous system, creating a feeling of calm and an ability to cope better with others and the environment around the young learner, whether feeling stressed, having too much or too little energy, or being in a disorganised state.

Although few schools and settings may be in a position to have the facilities to offer the range of approaches and therapies that Ysgol y Deri provides, the case study confirms the different types of support young people may need and highlights the importance of focusing on emotional wellbeing whether a child has complex cognitive difficulties or has considerable academic potential.

Free schools

As the pupil population has grown, free schools have been one way of meeting demand. Many are in deprived areas and are seen by the government as giving disadvantaged pupils access to greater choices. Free schools can be set up by charities, groups of teachers, existing schools or parents. They can be primary, secondary, all-through or 16 to 19. They can also be specifically for pupils who need a different environment, such as free special schools for pupils with different types of SEND, or AP academies for pupils who need alternative provision because they have medical needs, or have been, or are likely to be, excluded.

The next case study features another school designed from scratch for a specific population and one where both the indoor and outdoor environment had to be developed.

Case study of Church Lawton school

Church Lawton school is a free special school for autistic pupils. The National Autistic Society (NAS) has been providing autism-specific education since the 1960s. When free schools became an option, with the charity acting as sponsor, the NAS Academies Trust was established to own and manage its free schools. In 2015, Church Lawton School was the second free school it opened. Not many may have the opportunity to design their provision from scratch, but that was what happened in the case of Church Lawton, which was designed to meet the needs of autistic pupils. After designing the building and being satisfied that it provided an effective working atmosphere for pupils and staff, everyone's attention was turned to improving the outdoor area where, although they were fortunate to have plenty of ground, staff and pupils needed to plan how to maximise its use.

Case study Church Lawton School, Stoke-on-Trent

Church Lawton is a special free school for 64 pupils aged 4 to 19 who have a diagnosis of autism, an EHCP and live in the area of East Cheshire, Staffordshire, Stoke or neighbouring authorities.

The school was purpose-built. The rooms have a lot of natural light along with LED dimmable lighting, noise absorption panels were built into ceilings and walls throughout, and there are spacious low-arousal corridors. There are individual

learning areas in every classroom and each opens onto an outside area. There is a learning centre for children with more complex needs and a nurture class where lessons are kept to 20 minutes. Children with a particular gift for a subject can study it at an appropriate level, including taking GCSE exams early.

After much fundraising, the Sport and Sensory Field was opened recently. In addition to an all-weather surface for badminton, basketball, hockey, football, cricket or tennis, features include:

- For touch: plants, different gravel surfaces and barefoot walks
- For movement: scooters, tricycles, bikes for towing and go-karts (all of which require communication) and a cycle path
- A wooden viewing gallery overlooking the sports pitch kitted out with picnic-style tables, so it can be used for outdoor lessons and breaktime chats
- A life skills hut where students can practise making beds, setting a table and preparing tea and toast.

The school is a proponent of outdoor Adventure Education. Activities offered include: climbing, skiing, bush craft, horseback riding, orienteering, camping, sailing and canoeing.

The principal, Paul Scales, says:

> Autistic students can experience sensory overload. As well as creating a comfortable, quiet and spacious place to learn inside the school, Adventure Education involves collaborative learning experiences with a high level of physical (and often emotional) challenge. Practical problem-solving, explicit reflection and discussion of thinking and emotion may also be involved.

The emotional wellbeing of everyone at the school is an integral part of what the school does and contributes significantly to a calm and considerate ethos. There is a very active Wellbeing Team and staff can identify wellbeing concerns of students through referral sheets kept in the staff room. Every child has a learning mentor who supports them, helps them to carry out their programme, and keeps in touch with families.

The school was recently successful with an Erasmus + (EU) application for KS4 and Post-16 students under a programme called 'Getting ready for adult life'. The project involves Church Lawton teachers and pupils linking with pupils who have Asperger's syndrome or high-performing autism – the terms used by the Erasmus + programme, rather than the school or charity – and attend Rodengymnasiet in Norrtälje, Sweden. To travel, spend time away from home and meet new people are opportunities to practise the skills of self-management

and social interaction. The objective is to raise self-confidence through real-life challenges which are outside students' comfort zones and are supported by both sets of staff.

International links

In common with Church Lawton, the next case study school has both strong international links and an emphasis on pupils helping to create a better environment indoors and outside for their school community.

Case study of Waunarlwydd Primary School

Waunarlwydd is a primary school in Swansea and is part of the North Gower Partnership, which is a long-standing collaboration between the feeder schools to Gowerton Comprehensive School. The school has been one of the pioneer schools, helping to develop a new curriculum that starts in 2022 (Welsh Government, 2020). This will include a focus on the physical, psychological, emotional and social aspects of life. One of the six areas of learning and experience is 'health and wellbeing'. Ruth Davies, the head teacher, says:

> We are a community which believes strongly in the value of building positive relationships. The safety and well-being of our children are some of our priority aims. Our team works collaboratively to provide an environment which allows pupils to feel safe and well-cared for, as it is our belief that this remains a pre-requisite for progress and achievement.

Case study Waunarwlydd Primary School

The school takes pupils from the age of 3, but toddlers from Plant Bach Preschool are invited to join the Nursery class for an hour each week, to help them prepare for school.

To help children develop leadership and management skills, every child in KS2 applies to be part of one of ten Senedd groups. (In Wales, there is no separate KS1 as the foundation stage is extended until KS2.)

The school has ten Senedd groups, which grew out of the school's work as a Rights Respecting School. These groups meet regularly to discuss ideas for improving their chosen area of the school. Each Senedd group elects a Chair, who meets with the head or deputy head, every half-term, to update them on their action plans. These ten chairpersons form the school council.

At the first meeting of the *Eco Senedd*, the children developed their mission statement:

> We will make our school clean and green, Together we are the eco team.

Since then, they have worked with the rest of the school community to sow seeds and to plant trees and shrubs, as well as conducting environmental surveys. Under the slogan: Reduce, Reuse, Recycle, an assortment of articles, such as batteries, toothpaste tubes and brushes, writing equipment and crisp packets have all been collected and recycled.

The Healthy Schools Senedd designed a healthy lunchbox leaflet for parents and has created zones in the playground to promote a healthy body and mind.

The school has a number of links with schools across the UK and internationally. One of these is through 'Comenius' (https://uk.april-international.com/en/exchange-programmes/comenius-programme) which is a project funded by the British Council. It enables schools to work collaboratively on a sustainable development project and to find out about approaches to sustainable development in other countries. A by-product of this partnership is the opportunity to learn about different cultures and traditions through email and 'snail mail' exchanges between pupils. Another British Council funded project, 'Connecting Classrooms' linked Waunarlwydd with schools in Trinidad and Tobago. Pupils shared projects and explained their country's history, cultures and traditions. Through the Welsh Assembly, the Chongqing-Wales Partnership has enabled many schools in Swansea to have a direct link with this south-west area of China.

The school has gained the International School Award, partly as a result of its work as a 'Rights Respecting School'. At Waunarlwydd, there are eight core rights which are at the heart of the school's ethos:

1 The right to know our rights
2 The right to learn
3 The right to play
4 The right to be safe
5 The right to be heard
6 The right to be healthy
7 The right to our own beliefs
8 The right to a name

The school ambassadors' scheme is run in primary schools across Wales. Two children are elected by the other pupils in each school to be ambassadors. The ambassador's role is to:

- Inform children in their school about the Children's Commissioner for Wales
- Inform children in their school all about children's rights and the United Nations Convention on the Rights of the Child (UNICEF, 1989)
- Work alongside the school council to find out what children in the school think could be improved and then work with other people in the school to change things

In addition to other developments already mentioned, the school has a woodland walk, which provides all classes with first-hand experiences and opportunities to problem-solve as part of outdoor education.

Outdoor learning

It was Confucius (551–479 bc) who is reported to have said:

> I hear and I forget
> I see and I remember
> I do and I understand

Although plenty of practical learning can, and does, go in in classrooms, the outdoor environment lends itself to hands-on experiences and the development of physical skills. Outdoor learning is about more than taking outside what could happen indoors.

Learning Outside the Classroom (LOtC)

The organisation, LOtC, defines outdoor learning as using places other than the classroom for teaching and learning. As well as school grounds, it suggests that this can include:

- Local woods, parks or nature reserves
- Museums, theatres, galleries, libraries and archives
- City farms, farms, the countryside and community gardens
- Zoos and botanical gardens
- Heritage and cultural sites
- Language and fieldwork visits
- Field study and environmental centres
- Remote wild and adventurous places
- Expeditions abroad

People who are champions of LoTC include the Duke of Edinburgh; Richard Branson; and the presenter, explorer and naturalist, Paul Rose, who writes on the organisation's website:

> I shone at three things in school – trips away from school, sports and metalwork. Those classrooms were not for me: overheated, incomprehensible and dull lessons. I was so bored. Then, when I was fourteen, my geography teacher took us outside of the classroom and all the horrors that it held for me. I shall never forget how alive and in tune with nature I felt.

Learning Through Landscapes

In common with LOtC a UK charity, 'Learning Through Landscapes', which specialises in outdoor learning and play in educational settings, is also well supported. Its patrons include David Attenborough and Jonathan Porritt, the sustainability campaigner, writer and advocate of the Green Party. On its website is 'The Good School Playground Guide', with a foreword by the Chief Medical Officer for Scotland and illustrations of playgrounds throughout the UK and further afield. 'Learning Through Landscapes' is a founder member of the International School Grounds Alliance (ISGA), which works across Europe, North America, Africa and Australasia.

Forest School

One branch of outdoor education is Forest School, a movement that is now popular across much of the UK, Germany and Scandinavia.

Information point History of Forest School

1970s/80s	Building on a long history of outdoor education, the Forest School movement emerged
1990s	After a visit to Denmark and its preschool system's open-air culture, a group of nursery nurses from the UK started a Forest School for preschool children. Soon Forest School was being offered across the UK.
2000s	Shortly after the turn of the century, a national conference led to a UK definition, saying that it helped to: 'develop confidence and self-esteem, through hands-on learning experiences in a local woodland environment'.
2010s	Six guiding principle were agreed upon, which included the need for frequent and regular sessions in a wooded environment where children could make choices and be supported to take risks, with qualified practitioners being in charge (www.forestschoolassociation.org)

Case study of Belmont School

The following case study is of Belmont School in Harrow, London, which is an accredited Forest School. For many pupils and families, their homes and community do not have the space or opportunity to explore an outside world of woodland or natural environment. This has been a significant reason why Belmont has developed as a Forest School, accredited by the National Forest School Association.

This move was identified as an important and integral part of the school's development and was enabled by the appointment, in 2016, of an assistant head who now has two days a week leadership time, including that for Forest School. This decision and appointment of a fully accredited Forest School trainer has been so successful that the school is now a much sought after provider of formal and informal support and training to develop Forest Schools nationally, and internationally. Teachers have visited Belmont from countries as far away as China, South Korea and Australia. This has led to two additional members of staff being trained as Forest School teachers.

Case study Belmont School

Belmont is a multi-cultural primary school in Harrow. It is part of a diverse community and celebrates the achievements of all learners, focusing not just on academic success but also sporting and creative achievements.

The aim of Forest School at Belmont is for pupils to enjoy and respect the outside world, with Forest School activities being seen as 'transformational'. The younger pupils have a weekly opportunity for Forest School activities, at school or nearby, while older pupils have regular visits and school journeys, too.

The activities encourage independence in all areas of life, as it is important that there are opportunities for children to learn to manage their own risks. This is achieved, for example, by allowing children of all ages to use tools, light fires, build dens and climb trees. These activities develop the ability to solve real-world issues, build self-belief and prepare young learners to take supported risks. In this way, Forest School helps participants to become, healthy, resilient, creative and independent learners.

The school also actively encourages families to engage wherever possible in Forest School activities, so they too can experience what Forest School offers.

In the school's vision it states that:

> Our curriculum is enhanced to ensure that children's learning is relevant, builds on their experiences and provides them with the skills they need to support them in later life.

The school believes Forest School helps create such opportunities.

Belmont has an interesting document on its website called 'Mental health promotion at Belmont School', which shows how other policies, including: Anti-bullying; Learning policy; Supporting pupils with medical needs; E-safety and acceptable user policy; Suicide and self-harm; and PSHE, combine to form part of promoting

mental health across the school. The use of the SDQ, Revised Children's Anxiety and Depression Scale (RCADS) and Conners Scale, means that, together with other relevant information everything can be recorded in one place, ('CPOMS'- a Safeguarding Software for Schools). This, in turn, enables the school to target early intervention strategies and support, as well as aiming to prevent emotional and behaviour problems, both in school and in the home, through:

1 Staff trained in identifying changes in behaviour that indicate emotional distress
2 Good home/school links to ensure any family changes are communicated
3 Strategies to support children when emotionally distressed

In common with other schools already mentioned, the school is recognised as a 'Rights Respecting School'.

An outdoor curriculum

The final case study is about a school which is not a Forest School, but has developed its grounds with the pupils in order to increase its curriculum offer.

Case study of Oak Grove College

Oak Grove College is in Worthing, West Sussex. It is part of a federation with three other schools: Cornfield, Herons Dale and Palatine. The school has made the most of its grounds to offer a wide range of learning opportunities to its pupils. The head teacher, Phillip Potter, says:

> The college's creative approaches to learning mean that many off-site visits are undertaken, the grounds are used extensively, and there is a practical approach to the curriculum, including our commitment and dedication to The Arts as a vehicle for the development of self-esteem.

Case study Oak Grove College, West Sussex

Oak Grove is a special school for around 260 pupils. It is a secondary day school with Post-16 provision. A wide range of pupils includes those who have moderate learning difficulties (MLD), severe learning difficulties (SLD) and profound and multiple learning difficulties (PMLD).

Learning through making is a fully integrated part of the students' educational experience, including practical activities on the school grounds. Working alongside staff and volunteers, students have developed, landscaped and planted the grounds themselves. By using the outdoors as a resource for all subjects, be it literacy and numeracy, science or art, students are able to work with nature,

understand the different seasons and what it means to design and alter, and care for and respect, their own environment.

Groups from other schools and local businesses, young adult mentors, parents and carers, all come to work at the school, making outdoor learning a real community project. The school has hosted Concordia, an international charity based in Brighton, which, since the 1940s, has linked volunteers to short-term projects in different countries. (Concordia is also a Delivery Partner for the NCS, which is described more fully in Chapter 5 of this book.) The grounds have been opened as part of the National Garden Scheme and the school has participated in Worthing Allotment Society's Annual Show.

The school believes that integration into the wider community and working alongside others, is a vital aspect of preparing for adult life. Year 10 and 11 students spend a day a week at three placements during the year – Northbrook College, Brinsbury College and the SAND Project, where a number of options is open to them, including travel training, catering and PE.

In addition to outdoor learning, Oak Grove, together with Herons Dale and Palatine schools, were part of a pilot for the Therapies in Schools service (www.outdoor-learning.org/). This has been funded by West Sussex County Council and delivered by Sussex Community NHS Trust. The TIS service works collaboratively with the existing therapy provision in the school to provide a 'one team therapy approach'. This has enabled schools, families and therapists to work in partnership so that pupils' educational and therapeutic needs are blended. The TIS service is now available to special schools across West Sussex. Additional therapists have been employed, who work alongside education staff so that they can provide personalised therapeutic input for their pupils. TIS delivers an accredited, modular training programme in three streams:

- Sensory processing
- Life skills
- Physical development

Each stream has three levels. TIS Level 1 training has been delivered to all the school staff involved and Level 2 is available for those who show interest in learning more advanced skills, while Level 3 creates 'Champions', who can be approached for support and advice. Parents, families and carers have also been offered Level 1 training.

Oak Grove College has two Wellbeing and Behaviour senior teachers, one for KS3 and one for KS4. In the conversation that follows, Sarah Ellis, who carries out the KS3 role, explains more about the TIS Project and how the school's outdoor learning is a central part of the school's curriculum.

In conversation with Sarah Ellis, Wellbeing and Behaviour, senior teacher for KS3

Q. Could you tell us about the school's involvement with the Therapy in Schools Project, funded by West Sussex CC and delivered by Sussex Community NHS Trust?

The Therapy in Schools pilot project first emerged as a joint initiative idea following the need to build a model of educational provision and support in West Sussex, enabling children and young people, wherever possible, to live and go to their local early years setting, school or college. Our special schools needed to be able to compete with independent schools outside the area that parents saw as providing better therapeutic support. In addition, schools reported that their staff lacked confidence in delivering physiotherapy and occupational therapy programmes to children with more complex needs and there was no training available

An important element of TIS is that they also work directly with the whole family as well as with the young person. This means that families feel more confident that their child's needs can be met locally and school staff feel more confident that their training has enabled them to support young people more effectively. The therapists offer surgeries to schools and their staff so that they can come and talk about students and get support and ideas for strategies. TIS is now in every special school in West Sussex and is fully staffed.

2. Could you say something about your school's outdoor and practical learning strand?

Our outdoor and practical learning strand is now known as Vocational Learning and involves a unit on enterprise. It includes Design Technology, Food Technology, Gardening and Enterprise.

These practical subjects are amongst the most popular with our MLD students and our aim is to build the confidence in students to leave us and go on to FE college to study these subjects. All subject-specific learners in KS3 have these lessons on a rotational basis throughout the year, and they are offered as options for KS4 learners. In KS4 different accreditations are followed in order to give the students access to FE and to mark their achievements. These include the Jamie Oliver Home Cooking Skills BTEC and The Prince's Trust qualifications. The percentage of young people with SEND in West Sussex who find employment after finishing education is very low. We are committed to encouraging our learners to look to the future and aim for employment. This is becoming increasingly successful.

The whole school uses the garden. We have a sensory area which our subject-specific learners have created for our PMLD learners and the pathways have been completed with the students to allow access for all. Our SLD learners also have gardening lessons with our specialist teachers and

use the garden for social communication, working together to grow, harvest and cook vegetables as well as a few sausages on the bonfire. Produce from the garden is used within the catering lessons and any excess is sold to staff to raise money for small projects within the garden.

We have constructed an outdoor cooking area, which as well as giving additional cooking space, means in the summer we can run an outside café during the annual Sixth Form Plant Sale. This is a large work-related learning project undertaken by our sixth-form students, to grow all sorts of flora in our polytunnels and these are then sold to the public across two weeks. The money raised has gone on many different things across the years, including the outdoor gym equipment.

More recently, the garden has become a place of solace for some of our SEMH learners. Heavy work such as digging and cutting has enabled students to work through their anger enough to be able to then talk about what is going on for them. Through this, we now have a fire pit and several tree stumps have been broken down and the ground made smooth. Students have been able to see that through harnessing their emotions, positive outcomes are possible. The grounds are also used to give students space to calm down. Our pastoral officers and teachers on pastoral duty will often walk with students if they are unable to focus in a lesson. The environment offers a grounding experience as well as quiet time to reflect on choices.

3. **How does your role of Wellbeing and Behaviour senior teacher KS3 link with the Pastoral Support Team?**

A year into this new role, combined with having been the strangest year ever, it is really interesting to see the dynamics slowly changing within the college. The roles came about from our deputy head retiring and the assistant head being promoted. The restructure has saved school a considerable amount of money which is something we have to do given our deficit budget. There is a senior teacher for KS4 and together we have line-managed the Pastoral Support Team. Meeting with them on a weekly basis has meant that we have been able to identify students who are displaying worrying behaviour very quickly. As a college we use CPOMS as a behaviour recording database as well as all our contacts with home and external agencies.

With the face-to-face knowledge and data from CPOMS we have been able to instigate several interventions run by the pastoral team to target students who were in danger of exclusion. This included a breakfast club and having lunchtimes together. We wanted to make sure that the pastoral team were not always dealing with negative behaviours and that the students and staff saw them as a positive support both within lessons and during breaktimes. For example, a student was having a particularly challenging time in maths. A programme was put in place where the student started off doing one-to-one maths out of the classroom, then they were

joined by a couple of other students from the class to do small group work. They then went back into class with the pastoral officer and gradually this support was reduced as they settled back in. Unfortunately, COVID happened so we didn't get to see the outcome of this.

Due to the changing needs of our MLD students, specific teaching staff have been given time each week to do one-to-one work with students. This could be if there has been an increase in negative behaviours, a change in home circumstances, friendship issues, early signs of poor mental health, or students becoming increasingly withdrawn. The decision as to who gets these places is discussed in the Pastoral Support Team meetings. We have also encouraged the team to be part of our behaviour panel meetings where we discuss students in need. Their insight and perspective are so valuable as they are able to work differently with students. Not having the title of 'teacher' can make a big difference. Listening to, acting upon and sharing information and ideas with the pastoral team has meant that their confidence has grown and they are becoming more proactive. Working on low-level disruptive behaviours has meant there has been a decrease in challenging situations.

4. **What do you think has made the most difference to the emotional wellbeing of staff or pupils?**

I think the biggest difference is in the degree of overall connectedness and a better overview of all that is going on. Staff are more willing to share their concerns, which means we can then act upon these swiftly. There is a consistency of approach and open dialogue. Both KS3 and KS4 senior teachers work closely with the safeguarding officer which means we are all aware of issues both in and out of school.

The TIS Project has had a significant effect on staff and students with the most complex needs. All staff in school have had at least Level 1 training in each of the strands and those who have wanted to, have been able to become TIS Champions in one of the three areas. This has caused a greater level of confidence across the whole staff as well as having positive outcomes for students. Where we once would have had to refer a student to an external agency to be assessed, we are now able to do this in-house. For example, we had a student arrive with us displaying challenging behaviour that disrupted learning for many. We put in several referrals to outside agencies which were all refused. However, we also used our Sensory Integration Champion and our Occupational Therapy Champion to observe the classroom behaviour and with this were able to produce a sensory diet and tailored timetable so the student could settle. The student now has one-to-one support at all times, but we are hoping that with the continued input from the Champions this may be reduced as they move up through school.

5. **Is there anything else you do which stands out in some way and others might learn from?**

Alongside the TIS Project we have also worked hard to build up good relations with other external agencies. All students with PMLD are discussed

at an annual meeting at the school, where all services come together to discuss the next steps for the young person. This has been invaluable, particularly for those students moving on from us to continuing health care.

We also now have a link with CAMHS who come to us once every half-term. The Mental Health Liaison Nurse offers slots for staff to take a young person and discuss their presentation. This Tier 2 intervention acts almost like a triage for CAMHS as we are able to discuss the likelihood of the young person needing to be seen at Tier 3. They also offer advice and signpost resources that we may have not been aware of. This has been particularly successful where students have presented with some worrying behaviours which could have been the result of adverse childhood experiences (ACE). We are also able to email or call the nurse if we need some advice or information. We require parental consent for these discussions, but it is a professionals meeting. The nurse is able to discuss what she knows with the Tier 3 team, which can speed up the referral process where needed.

Staff CPD is really important to us and all new members of staff undertake an induction programme. This includes a behaviour and wellbeing session, where the senior teachers go through the expectations of all members of the community, but also some of the many reasons a behaviour may be shown. This has had positive feedback and CPD sessions have been held to discuss ACEs, therapeutic language, brain development and trauma. This has led to staff wanting to talk about their own experiences with senior leaders, but also a greater understanding of what is going on for individuals.

This year we began the process of achieving the School Mental Health Award from the Carnegie School at Leeds Beckett University. We wanted something that could give a structure to what we already did, but also guide us to be even better. Our initial assessment of this was just before lockdown and we achieved 'embracing' status. We are looking to be 'excelling' and, through the work that is being done with our students with PMLD on their mental health, we hope to gain this next year.

We also have a wellbeing steering group made up of staff from the different areas of school. It is open to anyone and is a place where issues can be raised, discussed and then hopefully a solution found to help support staff. One of our Management Committee members also attends in case there is anything at governor level that can be done. Governors are visible at school and very approachable. This gives staff the confidence to know that the school is being led by those who understand its complexities and difficulties as well as being able to celebrate our achievements.

Conclusions

This chapter has been about the need to create the right ethos and environment, which will help to provide a welcoming place in which students and staff alike are happy to learn and work. This can prevent mental health issues

developing in the first place, while recognising that, for some, other adaptations, approaches and interventions will be needed. To achieve this, the impetus needs to come from the top and permeate downwards. It is by working together that schools or colleges can achieve the right ethos, where there are no cliques or feelings of 'them and us', but everyone is on the same side and working as a team to create a place where the wellbeing of all has a chance to flourish.

The final chapter draws together the themes that have emerged throughout the book. This is followed by a section that lists all the resources that have been mentioned and where more information about them can be found.

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the psychology of WELLBEING

THE PSYCHOLOGY OF **EVERYTHING**

ROUTLEDGE

4

STRESS AND COPING

On being well in yourself

NO RETURN?

A graffito on a wall in Hong Kong during the coronavirus pandemic read, 'We can't return to normal because the normal we had was precisely the problem'.

Burnout due to overwork is a universal problem. But legislation, when it exists, more often applies to physical hazards, rather than psychological ones.[1] In 2019, a survey on work-related stress, published by the Health and Safety Executive, found there were 602,000 workers in the UK suffering from anxiety and depression. This led to 12.8 million working days lost, and the main causes cited – which are consistent over time – were workload, lack of support, and coping with change.[2] In the US, stress related to discrimination and poverty costs the US economy around $300 billion every year, in accidents, absenteeism, employee turnover, reduced productivity, and medical, legal, and insurance costs.[3]

When the World Health Organization (WHO) definition of health is 'complete physical, mental and social wellbeing', any deviation from perfection could be 'abnormal', and so needs to be fixed. But are any of us, ever, completely 'well in ourselves'?[4] Whatever the 'new

normal' will look like, we can start by examining the old one. And part of that is asking, is stress always a bad thing?

In this chapter, we consider the question 'what is normal?' We explore the tension between survival and growth and consider differ models of defining and coping with stress.

WHAT IS NORMAL WELLBEING?

A matter of adjustment?

'Normal' is not so easy to define. And we don't question it, until our behaviour or that of others flouts unspoken rules. And yet, normality is another idea central to our wellbeing.

In his poem *The Unknown Citizen*, composed in 1939, W.H. Auden gives us a eulogy by a government bureaucrat to a model citizen.[5] The poem is in the form of a dystopian report gathered from the data sources of a hyper-vigilant, totalitarian state. The poem ends with the lines:

> *Was he free? Was he happy? The question is absurd:*
> *Had anything been wrong, we should certainly have heard.*

Throughout the poem, Auden touched on one of the main criteria for psychological normality. But underpinning it all, based on an unremarkable life, the man is judged a saint, based on his conformity, compliance, and predictability. And questions of freedom and happiness are meaningless. Psychiatrist Robert Lindner, in his criticisms of psychology and therapy, argue that they are tools of adjustment. But he doesn't see this as a good thing. He rails, 'Corralled in body an enervated in spirit by these delegated, elected, or self-appointed herdsmen of humanity, our society has been seized and help captive by the delusion that adjustment is the whole life, its ultimate good'.[6] For Linder, the 11th commandment is 'thou shalt adjust'. Are you normal? And how do you know? Let's consider several criteria we can use to answer those questions.

Normality – where do we draw the line?

There are several ways theories in psychology define normal. We can use statistics, societal norms, positive mental health, levels of personal distress, and maladaptiveness.

Statistical criterion

In psychology we assume that most human traits and characteristics confirm to the normal distribution. It's informally called a 'bell curve' because of its shape. In the absence of a diagram, it helps to compare it to 'Anne Elk's theory of Brontosauruses' from *Monty Python's Flying Circus*.[7] Her 'theory' states, 'All brontosauruses are thin at one end, much, much thicker in the middle, and then thin again at the far end'. And, so is the normal distribution. If we imagine a line running down the thickest part of the beast (or the peak of the bell curve), that's the average – the mean. This is the measure of central tendency for the range of scores. And in statistics we also need a measure of the spread of the scores. This is known as the standard deviation. One standard deviation either side the mean accounts for around 68%. And two standard deviations either side the mean accounts for 95%. This percentage we'd consider to be normal, given variations due to individual differences. That leaves the 2.5% at the extreme ends (the head and the tail). But the statistical criterion is neutral. It doesn't distinguish between atypical behaviour that is desirable versus undesirable – such as a creative genius versus the disturbed despot. Just because most people do it doesn't make it desirable or that they ought to do it.

Deviation from the norm

A deviation from 'the norm' implies a sense of oughtness – not behaving as one should. It's usually judged by external standards, such as society, culture, community, organization, or family. It is the need to meet certain expectations, or our perception of them.

Handwashing after we've been to the toilet has an oughtness, and we'd hope it would be the norm. During the COVID-19 crisis, we have been bombarded with reminders to do it and how to do it. From a statistical perspective, we'd expect a 95% compliance rate, but in a pre-pandemic survey of European habits, only two countries, Bosnia and Herzegovina (96%) and Moldova (94%), hit the mark.[8] At the bottom of the table of compliance, some countries were around the 50% mark (mentioning no names). But post-pandemic with 'the new normal' we might see fewer differences between countries. There are different norms within countries, between countries, and throughout history. During the pandemic lockdown, anxiety, stress, and boredom were the norm. And in some societies, sexism, racism, and homophobia were the norm, and probably still are to a less blatant degree. In some, they definitely are. And as we discussed in Chapter Three, when viewed through an intersectional lens, there are norms which we accept for others that we would not accept for ourselves.

Positive mental health

Social psychologist Marie Jahoda's 1958 book *Current Concepts of Positive Mental Health* is often relegated to a paragraph in introductory psychology textbooks. And the criticisms they offer are more to do with a misreading of the original book.[9] The idea behind the book was to gather the main strands of the various theories of positive mental health. She found six major categories of concepts from an extensive literature review.[10]

There are:

1 *Attitudes of the individual towards the self* – this included a realistic sense of selfhood in relation to goals and objectives. A sense of the real-self versus the ideal-self, and self-acceptance.
2 *Growth, development, or self-actualization* – to aspire to reach one's full potential. Interest and motivation to reach future goals.
3 *Integration of psychological functions* (incorporating 1 and 2) – a balance of conscious and unconscious forces, and to resist and cope with stress.

4 *Autonomy* – self-determination and independence. That is, overly ruled by environmental factors.
5 *Adequate perception of reality* – this means relative freedom from need-distortion, or in order words, not distorting information to how you want to see it. Also, having empathy and social sensitivity.
6 *Environmental mastery* – this includes achievement in some areas of life, adequate functioning in the world (focus on process – getting along). Examples of these include (a) the ability to love; (b) adequacy in love, work, interpersonal relations, and play; (c) efficiency in meeting situational requirements; (d) capacity for adaptation and adjustment; (e) efficiency in problem solving.

Of course, judging by these standards, none of us is normal – they are a collection of ideals. But we can see here a prototype for models of human flourishing in psychology.

In another of Jahoda's works on unemployment, she identified five factors vital to wellbeing that stem from being employed. We can apply these to the destabilizing effects of the lockdown during the COVID-19 pandemic. During this time many people experienced a loss of time structure, social contact, collective effort or purpose, social identity or status, and regular activity.[11] However, a main criticism of Jahoda's work is the Western-centrism. In her review of positive mental health, many of the concepts have meaning in individualistic societies, more so than in collectivist ones. And running throughout is the assumption that good mental health and wellbeing depend on adjustment and productivity.

As Jahoda's findings mentioned the self quite extensively, social psychologist Michael Argyle cites four major factors which influence the development of the self and how we evaluate it (our self-esteem):

1 The ways in which others (particularly significant others) react to us – whether people admire us, flatter us, seek out our company, listen attentively, agree with us, avoid us, neglect us, tell us things about ourselves that we don't want to hear.

2 How we think we compare to others – favourable versus unfavourable comparisons.
3 Our social roles – some carry prestige and others carry a stigma. Some carry power and others are powerless.
4 The extent to which we identify with other people – roles aren't just 'out there'. They also become part of our personality, so that we identity with the positions we occupy, the roles we play, and the groups we belong to.

Personal distress

A key definition of normality is a subjective feeling of personal distress. It might not be obvious to outsiders because we might keep such feelings hidden. Signs of personal distress can be both psychological and physical. We might feel miserable, depressed, or agitated. Also, it might disturb sleep patterns and appetite and manifest in aches and pains.

When I have initial consultations with potential clients, it is common for them to ask whether coaching or counselling would be the best way forward. I ask questions to find out the level of personal distress. If their issues have a strong emotional part, then I can refer them on to colleagues in counselling of psychotherapy. Coaching is more about development goals.

Maladaptiveness

Sometimes people are judged 'abnormal' if their behaviour adversely affects their own wellbeing or that of others – physically, psychologically, or both. The concept is of being a risk to one's own or others' wellbeing or safety. Through the various definitions of normality there's a tension between 'fitting in' and 'just getting by' and the need to thrive and excel.

SURVIVAL VERSUS GROWTH

If you've ever attended a training workshop, it's unlikely you have avoided 'Maslow's Hierarchy of Needs'.[12] It's usually presented as a

pyramid, with 'self-actualization' at the peak – the idea that you can 'be the best possible version of you' – that's how self-help books describe it. And although it's overused, it offers a useful thread to link inequalities (from the earlier chapter) and stress.

- *Self-actualization*: realizing personal potential, self-fulfilment, seeking personal growth and peak experiences.
- *Aesthetic*: appreciation and search for beauty, balance, and form.
- *Cognitive*: knowledge and understanding, curiosity, exploration, need for meaning and predictability.
- *Esteem*: ego and status needs, and the need for recognition and to be valued.
- *Love and social belongingness*: family life, friendships, relationships, and intimacy.
- *Safety and security*: money, a job, health, and a safe environment.
- *Physiological*: food, water, sleep, and shelter – the basics to function/exist.

So as we move towards the top of the list we have growth needs, and as we move towards the bottom we have survival needs. We might call these basic needs the Four Fs (feeding, fighting, fleeing and 'copulating'). And the theory is that we need to satisfy the basic needs before we can satisfy the higher needs. Stress can occur at any level, depending on the pressures we face, the goals we have, and our resources to deal with them. We might experience frustration and conflicts, a disruption of bodily rhythms, life changes, daily hassles, or just the way we habitually deal with problems.

Psychiatrist Robert Lindner argues that our struggle to reach our full potential (or just survive) is a constant source of stress. According to him, we must conquer the 'triad of limitations' that forms our prison cell. 'One side is the medium by which we must live, the second is the equipment we have or can fashion with which to live, and the third is the fact of our mortality'.[13] It's bleak, but it resonates with the definition of wellbeing from the introduction – a state of balance between challenges and resources.[14] So, is wellbeing just the absence of stress?

WHAT IS STRESS?

How we conceive of stress determines how we respond and adapt to it, and how we cope with it. And we can advance three models of stress, each from a different angle:[15]

- *Stimulus* – stress is what happens to us.
- *Response* – stress is what happens inside us.
- *Transaction* – stress is what happens between us.

Stimulus – what causes stress?

In 1967, two psychiatrists, Thomas Holmes and Richard Rahe, created the *Social Readjustment Rating Scale* (SRRS). It consists of 43 life events, each scored to reflect the degree of adjustment it might need to get over them. These life events include the death of loved ones, divorce, personal injury, illness, losing one's job, trouble with the boss, and moving to a new house. It also covers marriage, retirement, gaining a new member of the family, and holidays. And it looks at changes in habits such as diet or sleep patterns. The scores of each event range from 11 to 100 and the total score is between 11 and 600. A score of more than 300 indicates a high risk of becoming ill.[16]

For Holmes and Rahe, stress in an independent variable that acts upon the individual. And although higher SRRS scores correlate with illness, the association is quite small. But there are several criticisms of the theory. It assumes that change is inherently stressful, and that life events demand the same level of adjustment for everyone. It also assumes a common threshold beyond which illness will result. Furthermore, it sees a person as a passive recipient of stress. Later advances in the theory include the role of the individual's interpretation of life events.[17] But, the model still ignores the effects of life experience, learning, environment, and personality. However, the SRRS is still useful as a basis for discussion in a therapeutic situation or for chats among family and friends.

Response – how we react to stress

In his best-selling book *The Stress of Life*, published in 1956, endocrinologist Hans Selye outlines his general adaptation syndrome (GAS).[18] According to his theory, stress is a defensive mechanism and follows three stages: alarm, resistance, and exhaustion.

Gas: the three stages

Alarm: This refers to the first symptoms your body experiences in response to stress. The sympathetic nervous system activates these changes to prepare to combat or avoid the stressor (fight or flight).[19]Your heart rate increases, your adrenal gland releases cortisol (a stress hormone), glucose, and you get a boost of adrenaline, which increases energy.

Resistance: In this stage, if the stress is not removed the body begins to recover from the alarm reaction and to cope with the situation. Your body stays on higher alert and resists the stressor. If you overcome the stress or it ceases to be a problem, your body continues to repair itself. And your hormone levels, heart rate, and blood pressure return to pre-alarm states. In this stage you might experience irritability, frustration, and poor concentration. The parasympathetic nervous system restores returns physiological levels to normal. Also, this system causes the 'freeze' response in the body so that you feel unable to act or move.

Exhaustion: This stage is the result of chronic stress – struggling with stress for extended periods. It drains your physical, emotional, and mental resources. It can result in fatigue, disturbed eating patterns, anxiety, burnout, and depression. Physically, chronic stress impairs the immune system, making us less able to fight off attacks from bacteria and virus. It is also associated with asthma, colitis, and ulcers and is implicated in heart attacks and cancer. In fact, chronic stress has a negative effect on all bodily systems.[20]

It is neither possible nor desirable to remove every stressor from our lives. But if we spot the early warning signs for us, we can take steps to manage stress levels and lower our risk of the more serious conditions. Exercise, breathing exercises, laughing, and meditation can help your body to recover at the resistance stage and keep stress at a healthier level.[21]

What is healthy stress?

In *The Stress Concept: Past, Present and Future*, published in 1983, Selye distinguishes between bad stress, which he calls *distress*, and the good stuff: *eustress*. What we commonly call stress is distress, when we get a 'shut-down' of higher level thinking as we focus on basic survival needs (The Four Fs). In constrast, eustress is marked by focused attention and enhanced performance. Many of us need the threat of a deadline to get us started on a task.[22] This classification follows on from the Yerkes-Dodson law.[23] For complex, unfamiliar, or difficult tasks, we need moderate levels of stress for optimal performance. Without any stress we remain unmotivated, but when overwhelmed our performance declines.

Transaction – how do we cope with stress?

The transactional model sees stress arising between people and their environment. One problem with the SRRS is most of the 43 life events are not daily events. To explain stress as a more dynamic (and everyday) process, psychologists Richard Lazarus and Susan Folkman advanced the transactional theory of stress and coping. They define psychological stress as 'a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her wellbeing'.[24] The appraisal is a process of categorizing any encounter in how it is likely to affect wellbeing.

The model applies two levels of appraisal, and then a choice of coping strategy:

- *First appraisal of the event* – Is it insignificant? Is it desirable or likely to benefit me? Or am I in trouble? Is it a threat, a challenge, or a loss?

(Here we might misperceive a trivial event as a threat.) Also, there's an appraisal of whether the challenge might become a benefit.

- *Second appraisal* – Do I have the resources for how to deal with the negative event to ensure a positive outcome? Can I cope with this situation? If not, a negative stress reaction occurs. Resources can be physical, social, psychological, or material. (Here we might not accurately assess our resources or lack confidence in our ability to cope.)
- *Coping strategy* – Based on the second appraisal we use either emotion-focused or control-focused strategies.

Emotion-focused coping

Emotion-focused coping involves trying to reduce the negative emotional responses associated with stress, such as sadness, fear, or frustration. If the stress is outside your control, then it might be your only option. Some of these strategies are quick fixes and can become habits, which also lead to stress. We might use food, distraction (watching TV), exercise, journaling (writing down thoughts), prayer, mindfulness, breathing techniques, or talking to someone (friends, therapist, coach). A therapeutic intervention can include a new cognitive appraisal of the stressful event. Of course, other emotion-focused strategies include alcohol, drugs, and gambling.[25] If you experience a bully in the workplace, start to keep a diary to deal with the emotion, which might later become evidence as part of a problem-solving strategy.

Control-focused coping

Control-focused strategies attempt to go to the source of the issue, such as problem solving, time management, new learning or training, and getting support, mentoring, or coaching.[26] This might also include getting more information to re-evaluate the problem. It might also include recourse to formal complaint procedures, or legal remedies. Other strategies include reading a book or controlling the amount of bad news you attend to.[27]

Another transactional model of stress involves taking control of the small stuff on a daily basis.

EVERYDAY HASSLES AND UPLIFTS

Psychologist Allen Kanner and colleagues[28] proposed a theory of stress based on the petty hassles we meet, such as losing keys, spilling drinks, or encounters with rude people. They composed a *Hassles Scale* of 117 items. They balanced this with an *Uplifts Scale* of 135 items, such as getting on well with people, receiving compliments, or just generally feeling good that day. In a study lasting over 12 months, the researchers found that hassles predicted negative psychological symptoms of stress, and hassles were a stronger predictor than that measured by the SRRS (major life events). One finding, useful for coaching, is that major life events, such as divorce, exert stress by several daily hassles. These including managing money, eating alone, or simply having to tell people about it.[29] And this everyday approach has two main benefits. First, it helps to break down major stressful events into manageable goals for control-focused coping, which, second, helps to tackle physical symptoms as they occur.

At the end of each day we do a mental balance sheet. If hassles outweigh the uplifts, we say we've had 'a bad day'. And for the opposite, we call it a good day. And the benefit of this approach is we can keep a check on the day to neutralize hassles and create our own uplifts.

And this idea of 'control what you can as you go' is a central theme in the idea of how some people manage change better than do others.

PSYCHOLOGICAL HARDINESS

Psychologists Suzanne Kobasa and Salvatore Maddi propose a combination of attitudes that creates a buffering effect against stress. Initially they studied male business executives to find out why some developed health problems while others remained healthy. And over

the years the buffer effect has been shown in a large variety of groups including the military, firefighters, and university staff and students.

The three attitudes of hardiness have a moderating effect on stress by encouraging effective mental and behavioural coping, building and using social support, and practising self-care. Rather than a personality characteristic, it is more of an explanatory style – a series of attitudes (the three Cs) that shape our view of the world:[30]

- *Commitment* – 'a predisposition to be involved with people, things, and contexts rather than be detached, isolated, or alienated'.
- *Control* – 'struggling to have an influence on outcomes going on around oneself, rather than sinking into passivity and powerlessness'.
- *Challenge* – 'wanting to learn continually from experience positive or negative rather than trying to play it safe by avoiding uncertainties and potential threats'.

Maddi stresses the importance of adopting all three attitudes and not letting one dominate. Individuals 'high in hardiness' are more likely to put stressful life events into perspective and tend to perceive them as less of a threat and more of a challenge and as opportunities for personal development. Consequently, stressful events are less likely to impact negatively on a person's health.

In my coaching practice and confidence-building workshops, I use the three Cs to encourage clients to set small meaningful goals – to reach out and show curiosity about the world, to take stock of the small things that are already in their control, and to break down a larger problem into smaller challenges.

LIFE SKILLS/LEARNING SKILLS

In my professional practice I run a workshop, *Learning Skills as Life Skills (and Vice Versa)*, which illustrates how we can bring together all aspects of psychology to improve wellbeing and enhance performance. It is a modified structure from my study skills book, *Letters to a New Student*.[31]

It offers a model to flourish in education as in life and draws on transactional theories of stress and control-focused coping. It's tempting to view formal education as learning and then everything else that happens afterwards as your 'real life'. However, it's a false dichotomy. We continue to learn throughout our lives, whether we want to or not. How we approach learning informs how we approach life and vice versa. I offer four interacting factors as a blueprint for lifelong learning: *attitudes*, *wellbeing*, *cognition*, and *management*. A change in one can have a knock-on effect in the others.

Attitudes

Attitudes are the cornerstone of how we make sense of the world. In coaching, I use the tenet 'the viewing influences the doing, and vice versa'. It's a key principle in confidence building that emphasizes the link between thoughts, feeling, and actions. How we view the world shapes what we do in the world.[32] The main strand in this factor is psychological hardiness – the three Cs.

Wellbeing

Wellbeing is a strong theme in the book, and is related to how we can reduce stress, improve mood, and boost cognition. The idea is to lay the foundations and give yourself a head start when studying. The wellbeing factor includes diet and hydration, exercise, sleep, and relaxation exercises and how they interact. When we feel stressed, these are often the first things we sacrifice. I'll outline, briefly, some of the intersections and how they support learning (and life in general).

- *Diet*. A healthy (no junk food) diet has a positive impact on gut bacteria (the microbiome), which helps us to absorb nutrients from food. As most of our serotonin ('the happy chemical') is made in the gut, a poor diet can inhibit it and lower mood

and can be linked to anxiety. Although the research on hydration is mixed, some studies show that low hydration can impair cognition.[33]

- *Exercise*. We can boost cognition with just 20 minutes of aerobic activity, and this can also help improve your sleep. Exercise can also lift our mood, and short bursts of physical activity are useful in releasing stress and providing a break during long work periods.[34]
- *Sleep*. Unsatisfying sleep and disturbed routines have a negative knock-on effect for diet, and you'll be more drawn to junk food. Also, sleep loss can impair cognition and lower your mood.[35]
- *Relaxation*. Breathing exercises and meditation practice can help to reduce stress so that it stays in the 'eustress range' to improve performance.[36]

Cognition

The basis for efficient learning is to work with principles of psychology instead of working against them. This approach includes short but intense study periods and creating variety in study plans to appeal to all the senses, as well as leading your reading with questions to deepen understanding instead of using surface tactics like rote learning.[37] We look at a method of active reading in the next chapter when we consider how to make the most of a self-help book.

Management

Making the effort, actively, to manage moods, emotions, time, and resources will support the learning process. It's also about recognizing that boredom is a choice. We have the resources to tackle this negative attitude and create variety and contextual cues to improve cognition. Part of this is setting goals and using control-focused coping strategies rather than being ruled by our emotions, and part of managing learning and life is knowing when to ask for support and where to get it.[38]

MORE ON COPING WITH STRESS

Does mindfulness work?

Mindfulness is defined as 'the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally'.[39] It is often touted as the panacea for all ills. But is it? Well, the short answer is no. The evidence-based answer is more nuanced. First, the basic principle in psychology for treating anxiety disorders is that anxiety and relaxation cannot co-exist.[40] And, relaxation techniques for part of the core psychological skills for elite performance in sports psychology.[41] So, there is a basis on which to suppose that mindfulness techniques have a beneficial effect.

A review of the research on the outcomes of mindfulness practices concludes that there is convincing evidence to show that they do help to lower stress, anxiety, and depression. And there are mixed findings on its effects to improve memory and attention. It has been effective when combined with psychotherapy, such as mindfulness-based cognitive therapy (MBCT) for recurring depression. Although, it's no more effective than other forms of psychotherapy. However, in non-clinical settings, such as schools and the workplace, results are more mixed. It depends on how mindfulness is used, and how well the studies are devised. There's also evidence of publication bias that favours positive results, which might exaggerate the effects of mindfulness.[42] So there is cause for some caution, but overall there is sound enough evidence to support the use of mindfulness as part of a holistic plan to deal with stress, as described earlier. But mindfulness on its own will not help to tackle the root of the problem, just our reactions. In many cases, that might be enough, but maybe we need to change the narrative. What if we challenged the Western appropriation of mindfulness and instead restore its own psychological roots. What if we used it in pursuit of a new normal to critique capitalism and consumerism?

Taking cures

Clinical psychologist Stephen Briers writes, 'people come into therapy . . . because they instinctively feel that the stories they have sought to live by are unravelling'.[43] Sometimes events can undermine our

sense of self and challenge the narratives we hold to be true. Sometimes we entertain a number of self-stories that compete and conflict. Or we might find ourselves cast in a role we didn't chose or feel powerless to escape.[44] Left unchecked, chronic (long-term) stress can lead to anxiety and depression, and so in Briers's terms, therapy can help to 'forge a new narrative . . . one that reinterprets the past or opens up new possibilities for the future'.[45] But which 'talking cures' work best?

The equivalence paradox

When we look at the research comparing the outcomes from different types of therapy, one clear finding emerges. It's called the equivalence paradox. And it is best summed up by the verdict of the Dodo Bird in *Alice in Wonderland*: 'Everyone has one and all must have prizes'.[46] In other words, they all perform much the same. And these findings have been consistent since the 1930s. So no, cognitive-behavioural therapy (CBT) is not the answer to everything either, despite the hype.[47]

We can attribute a large part of the therapeutic effect to 'common factors', such as the relationship with the therapist (30%), and placebo, hope, and expectancy (15%). The specific techniques and models explain 15% of the treatment variance. And the largest factor, which accounts for 40%, is for the personal resources and life circumstances of the client.[48]

Finding help

The most important thing is to make sure you seek out a qualified therapist. Every country has accreditation bodies for psychotherapy, counselling, and coaching, and each has guidance on what questions to ask. However, many of the practical considerations are determined by how the sessions are funded. When funded by employers, health insurance, or a referral from your doctor, it tends to be for a fixed number of sessions. You are also unlikely to be given any choice in the type of intervention. However, research indicates that the optimal number of sessions is between four and ten. And surprisingly, the median number of therapy sessions is just one. We are not sure whether therapy didn't suit these clients, or whether one session was

all it took to make a difference.[49] Finally we consider thoughts of a new normal. And this shift is not necessarily a new post-pandemic normal. That's likely to take time. It might just be something that's 'new to you'.

TOWARDS A NEW NORMAL

As the UK prepared to ease lockdown restrictions, writer Matt Haig tweeted, 'Yes lockdown poses its own mental health challenges. But can we please stop pretending our former world of long working hours, stressful commutes, hectic crowds, shopping centres, infinite choice, mass consumerism, air pollution and 24/7 everything was a mental health utopia'.[50] Haig has spoken and written about his own mental health. And his two self-help-type books seem quite appropriate for post-pandemic reflection: *Reasons to Stay Alive* and *Notes on a Nervous Planet*. Also, it's noteworthy that book sales massively increased during lockdown. And we know that reading lowers stress.[51] So, more books might be part of the new normal.

The COVID-19 pandemic has offered us an opportunity to pause, reflect, and take stock of attitudes, beliefs, behaviour, and routines. What insights do you have on your ability to adapt your thoughts, emotions, and behaviour as the situation demands? How has your understanding of yourself and others changed for relationships, communication, and social awareness? What small things can you control to make a difference? What power or influence do you have over the lives of others?[52] Of all the changes you had to make, what's worth hanging on to?

SUMMARY AND REFLECTION

In this chapter we:

- explored several criteria for normal in the context of wellbeing
- considered three ways in which to understand stress, that is, as a stimulus, as a response and as a transaction. mechanisms.
- looked at life skills as learning skills and how to cope with stress.

How has the information in this chapter affected your idea of 'normal wellbeing'? And what might a 'new normal' look like, for you?

In the next chapter we explore the self-help industry, including how to choose and use a self-book.

LIFESTYLE MEDICINE SERIES
James M. Rippe, *series editor*



Manual of Lifestyle Medicine

James M. Rippe, MD

CRC Press
Taylor & Francis Group

11 Lifestyle Medicine and Brain Health

KEY POINTS

- Brain health has become an area of considerable research with multiple, new understandings.
- Risk factors for decline in brain health and cognition are similar to risk factors for cardiovascular disease.
- Lifestyles modalities such as regular physical activity, healthy nutrition, and stress reduction as well as social interactions can all play significant roles in maintaining cognition and other aspects of optimal brain health.

11.1 INTRODUCTION

A healthy brain is essential for a fulfilling life. Many lifestyle measures play particularly important roles in maintaining brain health. Multiple aspects of brain health will be discussed in this chapter.

Cognitive function is one component of brain health which is essential for maintaining quality of life (QoL) and functional independence, and is a very important component of the aging process. As life expectancy continues to increase in developed countries, the numbers of individuals over the age of 65 will undoubtedly increase dramatically over the next 15–20 years. Currently, it has been estimated that there are 47 million people with dementia worldwide and this is projected to increase to 75 million individuals by 2030 and 131 million individuals by 2050 (1).

There is a particularly strong link between brain health and cardiovascular health. This essential fact is underscored by the Presidential Advisory from the American Heart Association (AHA) and the American Stroke Association (ASA) on "Defining Optimal Brain Health in Adults" (2).

It is clear that positive lifestyle measures play essential roles in maintaining healthy cognition throughout the lifetime. Poor lifestyle factors may compromise brain health and are also associated with poor cardiovascular health. These include uncontrolled hypertension, diabetes mellitus (T2DM), obesity, physical inactivity, smoking, and depression (3). All of these conditions have been shown to be potentially ameliorated to some degree by positive lifestyle measures. Many of these lifestyle measures are included in the seven areas to achieve optimal brain health from the AHA and the ASA. These seven factors will be discussed in some detail in this chapter.

It is also important to stress that many of the manifestations of the spectrum of cognition, ranging from diminished cognition to dementia, occur in individuals in

their 50s and 60s and beyond. Playing close attention to risk factors throughout a lifetime is important. This further underscores the importance of lifestyle measures. The recently released Physical Activity Guidelines for Americans 2018 Scientific Report also emphasizes the multiple roles that increased physical activity plays in brain health (4). Benefits of physical activity for brain health are prominent throughout the lifespan and will be emphasized in this chapter.

11.2 COGNITIVE IMPAIRMENT AND DEMENTIA

Sustaining brain health and cognition over a lifetime is critically important to allow individuals to maximize overall functional ability and independence. Maintaining brain health also helps reduce the risk of diversion of economic and health care resources for care and treatment. Poor brain health can ultimately manifest as cognitive impairment or dementia. These underlying disorders include Alzheimer's disease (AD), strokes, and other causes of vascular cognitive impairment, brain trauma, and other neurodegenerative disorders. It has been estimated that in the United States, 2.9 million people are living with dementia. This is the second largest number of individuals with dementia, second only to China, where there is an estimated 5.4 million people with dementia.

Modifiable risk factors for poor cardiovascular health are also relevant to risk factors for dementia and include uncontrolled hypertension, diabetes mellitus, obesity, physical inactivity, smoking, and depression. In addition to dementia, it has been estimated that one in eight adults over the age of 60 have memory loss and that approximately 35% of individuals in this age range report functional difficulties (5). In addition, it is estimated there are 5.1 million individuals in the United States aged 65 and above who have AD. This is predicted to rise to 13.2 million in 2050.

Cognitive impairment and dementia, as well as AD, are among the most expensive conditions to treat with, direct care expenses being greater than for cancer and equal to those of heart disease (6). Direct costs of cognitive impairment are only a portion of the total financial loss. For example, in 2011, more than 15 million Americans spent on average 21.9 hours per week caring for family members with dementia and these costs may actually be more than the direct cost of dementia itself (7). Furthermore, caregivers can experience significant declines in their quality of life. In addition, dementia and cognitive impairment may undercut effective treatment for some concurrent illnesses.

11.3 CARDIOVASCULAR AND STROKE RISK

Cardiovascular disease (CVD) remains the leading cause of mortality in the United States. Risk factors for CVD and stroke are common in the U.S. population. Over 100 million people in the United States (approximately 40% of adults) have hypertension and in over half of these individuals' blood pressure is not controlled (8). Risk factors for both heart disease and brain health also include diabetes mellitus (T2DM) and obesity, both of which have risen significantly in the United States over the past 30 years. Smoking is also a significant risk factor for both heart disease

and stroke. Given that these modifiable risk factors are shared for heart disease and stroke and decreased brain function, strategies to ameliorate these risk factors can play a significant role in brain health.

11.4 OPTIMAL BRAIN HEALTH

Most definitions of brain health emphasize the absence of overt or vascular or neurodegenerative injuries such as stroke or AD. Optimal brain health extends this concept to include optimal capacity to function and adapt to the environment (2). This includes cognition as well as lowering the risk of many other insults to the brain such as stroke.

Optimal brain health, including brain function, depends on many of the energy-intensive activities in the brain. This, in turn, depends on vascular supply to the brain. There is very little energy reserve within the brain. Thus, normal brain function is highly dependent on delivery of oxygen and glucose, which are, in turn, delivered by cerebral blood flow. All of these depend on both cardiovascular and cerebral vascular health.

There are multiple parallels between cardiovascular and cerebrovascular health and brain health. Aging has profound effects on multiple physiologic systems, including the structure and function of the cerebral vascular system. Furthermore, age-related alterations in various organs such as the liver, kidneys, lung, and immune systems can also have secondary deleterious effects on the brain. Conversely, brain dysfunction may lead to adverse effects on the CV system. Therefore, the health of the brain is inextricably related to both cardiovascular and cerebrovascular health.

According to the Presidential Advisory from the AHA and ASA, optimal brain health is defined as "optimal capacity to function adaptively in the environment." This encompasses multiple competencies, including the ability to pay attention, perceive, recognize sensory input, to learn and remember, to solve problems and make decisions, to have mobility, and to regulate emotional states. All of these domains are ultimately attributable to functions of the brain. Furthermore, bodily functions such as sleep, continence, and appetite are also affected by the brain.

Thus, brain health impacts on an enormous number of other health-related parameters, which, in turn, are clearly associated with various lifestyle habits and practices. For example, according to the Physical Activity Guidelines for Americans 2018 Scientific Report (PAGA 2018), the level of physical activity profoundly affects the level of cognition (4). Furthermore, physical activity improves various biomarkers of brain health, including neurotropic factors, task-evoked brain activity, volume, and connectivity. Furthermore, physical activity lowers the risk of impaired cognitive function.

11.5 BRAIN HEALTH ACROSS THE LIFESPAN

Many brain disorders tend to become manifest later in life, but, in fact, just like risk factors for cardiovascular disease, they are established throughout the life course. For example, the risk of stroke, which becomes more prevalent in the fifth and sixth

decades of life, depends not only on blood pressure at the time of these strokes, but also accumulated levels of blood pressure throughout life. This makes interventions focused on modifiable risk factors and protective factors important to modify even in young adulthood and perhaps even as far back as childhood.

An intriguing body of information exists about the role of physical activity throughout the lifespan with the development of what researchers have called "cognitive reserve." These investigators have argued that the primary effect of physical activity and exercise on the human brain is to build cognitive reserve (9). Cognitive reserve is hypothesized as the capacity of the mature brain to sustain function and resist the effects of disease or injury sufficient to cause decline in cognition or clinical dementia. It has been suggested that individuals who experience these declines have less cognitive reserve than individuals who do not and that physical activity helps to build and maintain this cognitive reserve. Cognitive reserve is further classified as either active reserve or passive reserve. The former refers to the efficiency and adaptability of neuro-circuits to respond to cognitive challenge, as exemplified by compensation and use of other parts of the brain. The concept of passive reserve refers to structural anatomic processes such as density of brain tissue, white matter integrity, and vascularity.

There is also a very strong association between brain health and the concept of QoL. This concept relates to the way that individuals perceive and react to their health status for non-medical aspects of their life. The relationship of various components of lifestyle, including stress reduction and physical reaction, is strong. This is particularly true in older adults (i.e., over the age of 50, and primarily over the age of 65). There is also strong evidence that individuals aged 18–65 who participate in regular physical activity improve health-related QoL compared to no physical activity.

11.6 RISK FACTORS

There is considerable interest and research in the area of how to achieve healthy brain aging and reduce the risk of stroke and cognitive decline. For example, T2DM has been associated with cognitive impairment and dementia presumably through potential mechanisms, including vascular and neuronal damage as well as diminished cerebral blood flow. Smoking is also highly correlated with risk of cognitive decline and dementia. Obesity, dyslipidemia, and high blood pressure also contribute to decreased vascular brain health. Adherence to healthy dietary patterns such as the Mediterranean (10) or DASH Diet (11) has been associated with reduced cognitive decline. Some evidence has suggested that obesity and hypertension are associated with cognitive decline, although the exact mechanisms remain uncertain.

Multiple studies have shown that levels of physical activity are strongly related to cognitive health outcomes (2,4). There is strong evidence that acute responses to vigorous physical activity yield transient benefits for various domains of cognition such as memory, processing speed, and executive control. These findings are particularly true in children and older adults. There is also evidence for chronic effects of moderate and vigorous physical activity, particularly in individuals over the age of 50, related to improved cognition. There is further evidence that physical activity

can improve diminished cognition related to such diseases as attention-deficit hyperactivity disorder, schizophrenia, multiple sclerosis, Parkinson's disease, and stroke (4). The most dramatic improvements in cognitive function associated with physical activity have been shown to involve executive function. Multiple studies supporting the relationship between physical activity and improved cognition have been summarized in the PAGA 2018 Scientific Report.

11.7 METRICS FOR DEFINING OPTIMAL BRAIN HEALTH

In the Presidential Advisory from the AHA and ASA, the core concept for defining risk factors for declining brain health utilizes the AHA's "Life's Simple 7" (12). The reason for utilizing this framework is that these parameters are common in their impact on both brain health and cardiovascular health. Furthermore, these are factors that, to a large extent, can be measured and can be modified through lifestyle decisions. The following seven factors are listed as components of both optimal brain health and Life's Simple 7:

1. *Manage Blood Pressure*
   High blood pressure is a major risk factor for heart disease and stroke. When your blood pressure stays within healthy range, you reduce the strain on your heart, arteries, and kidneys, which keeps you healthier longer.
2. *Control Cholesterol*
   High cholesterol contributes to plaque, which can clog arteries and lead to heart disease and stroke. When you control your cholesterol, you are giving your arteries their best chance to remain clear of blockages.
3. *Reduce Blood Sugar*
   Most of the food we eat is turned into glucose (or blood sugar) that our bodies use for energy. Over time, high levels of blood sugar can damage your heart, kidneys, eyes, and nerves.
4. *Get Active*
   Living an active life is one of the most rewarding gifts you can give yourself and those you love. Simply put, daily physical activity increases your length and quality of life.
5. *Eat Better*
   A healthy diet is one of your best weapons for fighting cardiovascular disease. When you eat a heart-healthy diet, you improve your chances of feeling good and staying healthy—for life!
6. *Lose Weight*
   When you shed extra fat and unnecessary pounds, you reduce the burden on your heart, lungs, blood vessels, and skeleton. You give yourself the gift of active living, you lower your blood pressure, and you help yourself feel better, too.
7. *Stop Smoking*
   Cigarette smokers have a higher risk of developing cardiovascular disease. If you smoke, quitting is the best thing you can do for your health.

(https://www.heart.org/en/healthy-living/healthy-lifestyle/my-life-check--lifes-simple-7)

There are other factors that impact on brain health. These include education and literacy that may be mediated by higher socioeconomic conditions, which, in turn, influence healthy aging and lifestyle choices. In addition to educational level, the quality of education in early life also is known to contribute to cognitive outcomes later in life (13,14). Other factors have been studied, including air pollution, but results have not been consistent and therefore are typically not considered as a metric for optimal brain health.

11.8 MAINTENANCE OF BRAIN HEALTH

There are multiple longitudinal observational studies that show that lifestyle-related factors such as blood pressure control, T2DM, dyslipidemia, weight management, and smoking appear to influence the trajectory of optimal brain health. In the PREDIMED Study, individuals who were randomized into the Mediterranean Diet had modestly better cognition after four years compared to the control diet group (15). In the FINGER Study (16), individuals randomized to exercise, cognitive training, and coaching for vascular risk reduction, as well as adherence to the Mediterranean Diet, had a better cognitive performance at two years with particular emphasis on improvement in executive function. It should be noted that some studies have had neutral results with regard to maintenance of cognition. It has been speculated that a number of these studies only employed lifestyle measures for a period toward the end of life. This suggests that prevention of risk factors in the first place appears to be a more effective strategy for improving brain health, when compared to later in life interventions.

11.9 PHYSICAL ACTIVITY, ANXIETY AND DEPRESSION, AND STRESS REDUCTION

Anxiety, depression, and stress are all endemic in the modern, fast-paced world. Lifestyle interventions have been demonstrated to play an effective role in ameliorating all three of these conditions.

- *Anxiety:* Within mental health disorders, anxiety is the most common. The overall prevalence of anxiety disorders in the population has been reported as over 30%. Regular physical activity has been demonstrated in multiple studies to lower both state anxiety and trait anxiety (17). State anxiety has been shown to be reduced immediately following a single session of exercise, while trait anxiety appears to require training periods of at least ten weeks. The studies which have explored anxiety typically utilize 30 minutes of moderate intensity physical activity per session.
- *Depression* (18)*:* Depression is also quite common, with a lifetime risk of significant depression of 10% in the U.S. population. Even in the absence of significant depressive disorders, the symptoms of depression can negatively

influence health and quality of life. Physical activity has been repeatedly shown to decrease symptoms of depression. Typical levels of physical activity employed in research in this area have involved at least 30 minutes of moderate intensity physical activity performed on a regular basis.

- *Stress* (19)*:* Stress is quite common in the modern society. Some estimates have suggested that more than 30% of individuals have enough stress in their daily lives to hinder their performance at home or at work. Multiple lifestyle medicine modalities have been demonstrated to be effective for stress reduction, including regular physical activity, mindfulness meditation, and others. These issues are dealt with in more detail in Chapter 4.

11.10 SLEEP

Sleep is an underestimated component of brain health. Sleep is an important determinant of health and well-being across the lifespan, and multiple lifestyle factors play important roles in sleep. Sleep is essential for biological function and also important for neural development, learning, memory, and emotional regulation of cardiovascular and metabolic health (20).

Three meta-analyses and three systematic reviews have all reported positive effects of greater amounts of physical activity on one or more aspects of sleep, including total sleep time, sleep efficiency, sleep quality, daytime sleepiness, insomnia, and obstructive sleep apnea (OSA). These results from physical activity have been demonstrated across the lifespan, including beyond middle age and older men and women.

Improvements in sleep also carry significant public health impact. Approximately 10% of adults suffer from clinically diagnosed insomnia and 26% of adults between the ages of 30 and 70 years suffer from OSA. The prevalence of OSA appears to be rising since the major risk factor for this condition is obesity. Weight loss is a highly effective treatment for OSA. In addition to specific disorders, 25% of the population reports getting inadequate sleep on at least 15 out of every 30 days and 25–48% of the population reports sleep problems of some kind.

Sleep problems are also associated with multiple health issues, including CVD risk factors, obesity, stroke, and all-cause mortality. In addition, sleep issues impact significantly on motor vehicle accidents. The National Highway Traffic Safety Administration estimates that 2.5% of fatal vehicle accidents and 2% of non-fatal accidents involve drowsiness while driving. Other estimates suggest that the estimate may be as high as 15–33%. Issues related to risk factors for both heart disease and improved brain health have the potential for improving multiple aspects of sleep.

11.11 FUTURE DIRECTIONS

The Presidential Advisory from the AHA and ASA also anticipates that there will be future research to expand components of optimal brain health. For example, there is a limited, but increasing body of knowledge related to childhood exposures that later affect cognition. Intrauterine and early life exposures may also play important

roles in neurocognitive development, as may stress in early life. These factors are subject to ongoing research and will undoubtedly be included in future considerations of defining and enhancing optimal brain health. Optimal brain health is also an important component of successful aging for not only CVD risk but also other components of this emerging concept. (See also Chapter 16 for further discussion of the components for successful aging.)

11.12 CONCLUSIONS

Optimal brain health is a key component of all stages of the lifespan. Optimal brain health predicts quality of life, functional independence, and risk of institutionalization in the older population. Advances in understanding of risk factors for optimal brain health have concluded that many of the same risk factors for declining cognition are shared between brain health and risk of cardiovascular disease. As the population continues to age, issues related to maintenance of healthy cognition and also decreasing the risk of dementia, including Alzheimer's disease, will become increasingly important. Lifestyle factors play an important role in virtually every aspect of optimizing brain health.

11.13 PRACTICAL APPLICATIONS

- Risk factors for heart disease and declines in brain health are similar. Thus, both of these considerations should be part of every patient encounter.
- Lifestyle measures such as increased physical activity, healthy nutrition, and stress reduction are all key components of maintaining a high level of cognition.
- Clinicians should discuss brain health with patients on every encounter.
- Lifestyle measures also are important for reducing the risk of dementia, including Alzheimer's disease.
- Risk factors for decreased brain health are similar to those of CVD risk and are summarized by the American Heart Association's "Life's Simple 7" framework.

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LIFESTYLE MEDICINE SERIES

INCREASING PHYSICAL ACTIVITY

A Practical Guide

James M. Rippe

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14 Overcoming Sedentary Behavior

KEY POINTS

- Sedentary behavior, particularly at high levels (more than seven hours of sitting or lying down during waking hours per day), is associated with increased risk of all-cause mortality and mortality from cardiovascular disease and Type 2 diabetes, as well as some cancers.
- Regular, moderate to vigorous physical activity can offset many of the increased risks associated with sedentary behavior.
- Benefits of moderate to vigorous physical activity are particularly strong for individuals with high levels of sedentary behavior and who are currently inactive.

14.1 INTRODUCTION

Considerable research has emerged over the past decade in the area of sedentary behavior (1). Good data are now available to suggest that sedentary behavior increases the risk of a variety of conditions including coronary heart disease (CHD) and Type 2diabetes (T2DM). Sedentary behavior is defined as "any behavior which is characterized by an energy expenditure of 1.5 METs or less, while in a sitting, reclining, or lying posture (2)."

In addition to its negative association with health outcomes, sedentary behavior is highly prevalent in the United Statespopulation. Data from the U.S. National Health and Nutrition Examination Survey (NHANES) indicate that children and adults in the US spend approximately 7.7 hours per day (55% of monitored time) being sedentary (3). Thus, reversing this sedentary behavior trend in the United Statescould generate significant health improvements. The current chapter examines sedentary behavior and its relationship to various health issues using the framework established by the Physical Activity Guidelines for Americans 2018 Advisory Committee Scientific Report (1).

14.2 SEDENTARY BEHAVIOR AND ALL-CAUSE MORTALITY

The PAGA 2018 Scientific Report rated the evidence for a relationship between the greater amount of time in sedentary behavior and all-cause mortality as strong (1). Based on a total of nine systematic reviews and meta-analyses that consisted of twenty original studies, a significant relationship between sedentary behavior and all-cause mortality was revealed (4–11). In addition, some of the studies showed that TV viewing or screen time were also related to all-cause mortality (12, 13). There

also appears to be a dose-response relationship between sedentary behavior and all-cause mortality (7, 9). The studies that have been reviewed showed that for every one hour increase in sitting time, or for more than seven hours a day sitting, there were dose-related responses to increased sedentary behavior and all-cause mortality (7). A similar response was revealed between TV viewing and all-cause mortality where, once again, using different criteria, a dose-response relationship was found (9).

An inverse relationship exists between the amount of moderate to vigorous physical activity and sedentary behavior when it comes to all-cause mortality (10, 11). The adverse effects on all-cause mortality from sedentary behavior are strongest amongst people who have low amounts of physical activity. This relationship is illustrated in Figure 14.1.

Individuals who were found to have greater than seven hours of sedentary behavior and also low levels of moderate to vigorous physical activity substantially increased their risk of all-cause mortality. Individuals who accumulated between 16 and 30 MET hours per week of moderate intensity physical activity substantially lowered their risk of all-cause mortality, even if they were sedentary for more than seven hours per day (11).

To put this in perspective, the PAGA 2018 recommends between 10 and 15 MET hours per week of physical activity. There are additional benefits for individuals

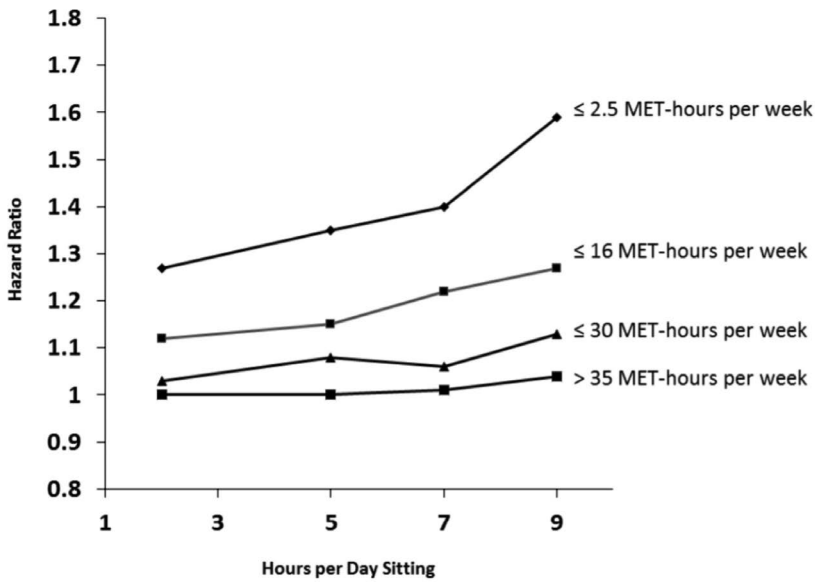

FIGURE 14.1 Relationship between sitting and all-cause mortality, stratified by amount of moderate-to-vigorous physical activity.

(Adapted from data found in Ekelund et al. 2016. 2018 Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Committee Scientific Report. Washington, DC US Department of Health and Human Services; 2018. Part F, Chapter 2, Sedentary Behavior.)

who achieve greater than 30 MET hours per week, although the incremental benefit is relatively small compared to the benefit of meeting the recommended dosage of moderate to vigorous physical activity outlined in the PAGA 2018 document. Individuals who have sedentary occupations (such as office work), thus, will particularly benefit from following the guidelines for moderate to vigorous physical activity on a weekly basis.

There has also been some suggestion that taking breaks in sedentary behavior may reduce its adverse health effects related to all-cause mortality. Some research exists in this area, although further research is required to determine whether or not periodic breaks in sedentary behavior will ameliorate some of the adverse health effects of high levels of this behavior.

The relationship between sedentary time and moderate to vigorous physical activity is depicted graphically in Figure 14.2 (1).

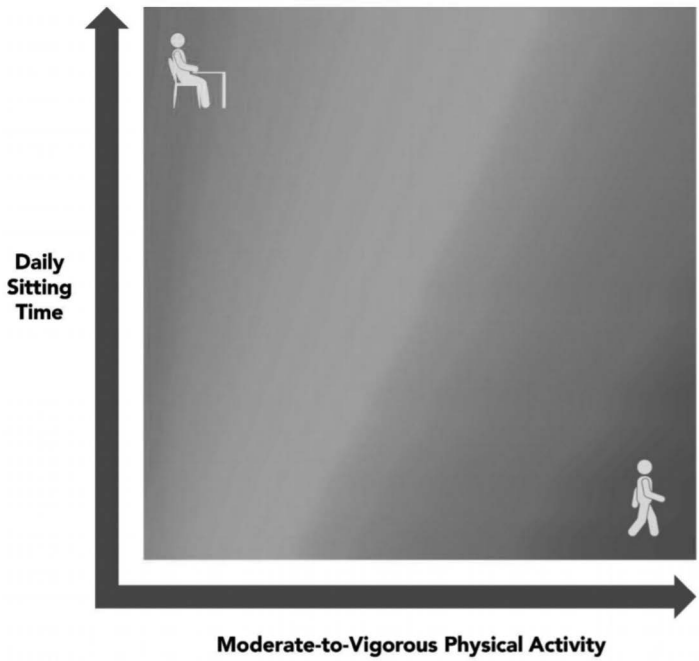

FIGURE 14.2 Relationship among moderate-to-vigorous physical activity, sitting time, and risk of all-cause mortality.

(Adapted from data found in Ekelund et al. 2016. 2018 Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Committee Scientific Report. Washington, DC US Department of Health and Human Services; 2018. Part F, Chapter 2, Sedentary Behavior.)

As this figure shows, the more sedentary time an individual participates in, the more the risk of all-cause mortality, unless they are physically active. Physical activity, as shown in this figure, largely can ameliorate the increased risk of sedentary behavior.

14.3 SEDENTARY BEHAVIOR AND CARDIOVASCULAR DISEASE MORTALITY

The risk of mortality from cardiovascular disease (CVD) and its relationship to sedentary behavior is very similar to the relationship between sedentary behavior and all-cause mortality (6, 10). The PAGA 2018 Scientific Report documented that increased physical activity of ameliorated increases in sedentary behavior. In addition, there was strong evidence that there was a dose-response relationship. Thus, the more physical activity an individual participates in, the more the increased risk of sedentary behavior is reduced. As depicted in Figure 14.3 sedentary behavior of greater than five hours a day starts to significantly increase the risk of cardiovascular disease and it is further increased if sedentary behavior is greater than seven hours per day (1).

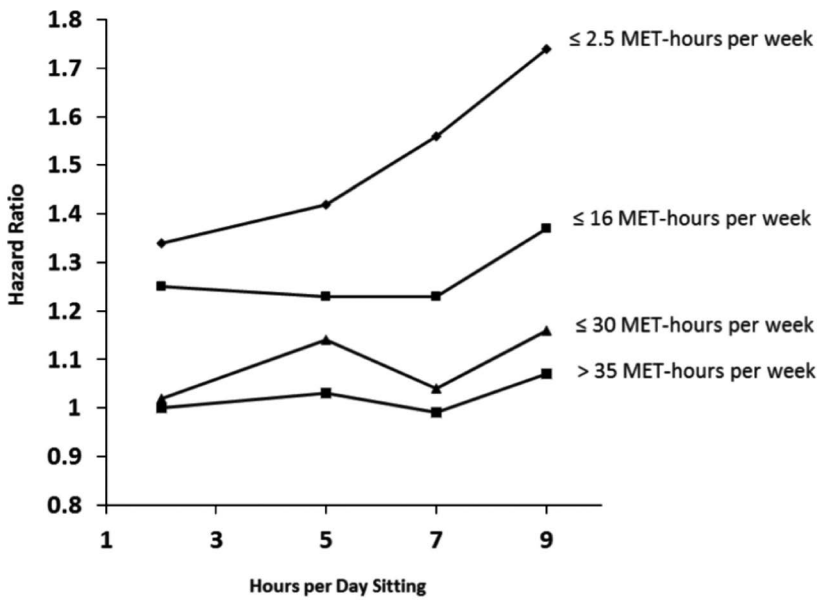

FIGURE 14.3 Relationship between sitting and cardiovascular disease mortality, stratified by amount of moderate-to-vigorous physical activity.

(Adapted from data found in Ekelund et al. 2016. 2018 Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Committee Scientific Report. Washington, DC US Department of Health and Human Services; 2018. Part F, Chapter 2, Sedentary Behavior).

14.4 SEDENTARY BEHAVIOR AND CANCER MORTALITY

The PAGA 2018 Scientific Report judged the evidence between a direct relationship with the amount of time spent in sedentary behavior and higher mortality rates from cancer as limited (10). While a number of studies have reported a significant association, the results were inconsistent. (One study showed a relationship for women only; another one showed one only for television viewing, but not sitting; and one showed a relationship only in current smokers.) Furthermore, cancer is a heterogeneous disease and many of the risk factors for cancer mortality are clearly affected by cancer screening, treatment availability, and efficacy.

The PAGA 2018 Scientific Report also concluded that there was insufficient evidence available to determine whether or not the relationship between sedentary behavior and cancer mortality was modified by physical activity. Evidence among specific types of cancer was moderate (14). For example, moderate level physical activity in sedentary individuals was related to decrease in added risk for breast cancer, ovarian cancer, prostate cancer, and lung cancer.

14.5 SEDENTARY BEHAVIOR AND TYPE 2 DIABETES

There is strong evidence that a significant relationship exists between the amount of time spent in sedentary behavior and risk of Type 2 diabetes (T2DM) (4–6, 10, 13). The issue of whether or not there is a dose-response relationship, however, is only supported by limited evidence. The issue of TV viewing appeared to be different between individuals who were active and inactive. Active individuals did not experience elevated risk of T2DM, whereas, inactive participants who reported high TV viewing were at increased risk for Type 2 diabetes (T2DM). More detail about physical activity and T2 DM may be found in Chapter 5.

14.6 SEDENTARY BEHAVIOR AND WEIGHT STATUS

Limited evidence supports a relationship between sedentary behavior and weight status (4, 5). The studies that are available in this area showed considerable variations among results. With regard to adiposity, once again studies are quite heterogeneous, allowing only limited support for the concept that sedentary behavior is associated with adiposity.

14.7 SEDENTARY BEHAVIOR AND MODERATE TO VIGOROUS PHYSICAL ACTIVITY

There is some evidence that moderate to vigorous physical activity lowers the risk of sedentary behavior (11). It is important to note, however, that the relative reductions in risk are most significant for those who are the most sedentary. In general, the same relationship holds for CVD mortality as well as for all-cause mortality with significant interaction between level of physical activity and sedentary behavior. Again, the most significant benefits come to those who are the most sedentary. When the data concerning sedentary behavior are stratified by level of sitting or TV viewing, the relationships are still quite similar with the amount of sedentary behavior, sitting or TV viewing

significantly increasing the risk of all-cause mortality, while the level of moderate to vigorous physical activity lowers the added risk in a dose-response manner.

14.8 PUBLIC HEALTH IMPACT

High levels of sedentary behavior are associated with increases in all-cause mortality, mortality from CVD and T2DM. High levels of sedentary behavior are also associated with moderate increases in certain cancers such as those of breast, ovary, and prostate.

There is good evidence that moderate or vigorous physical activity can lower the increased risk associated with sedentary behavior. This is particularly striking in individuals who have the highest level of sedentary behavior. For all of these reasons, physicians should assess the level of sedentary behavior in every patient and, if needed, recommend increased levels of moderate to vigorous physical activity. The public health impact on such changes could be very significant.

14.9 CONCLUSIONS

Both children and adults in the United Stateshave become increasingly sedentary. The average child or adult in the United States spends 7.7 hours per day being sedentary. This includes screen time, watching TV, and other tasks sitting or lying down. These levels of sedentary behavior have now been clearly demonstrated to increase all-cause mortality and mortality from CVD, T2DM, and some cancers. Levels of moderate to vigorous physical activity can offset the increased risk of sedentary behavior. This is particularly true for individuals who have the highest levels of sedentary behavior and are also inactive. For all of these reasons, physicians should assess the level of sedentary behavior in every patient and, if necessary, recommend increased levels of moderate to vigorous physical activity to lower the increased risk of sedentary behavior.

CLINICAL APPLICATIONS

- Sedentary behavior, particularly at levels of greater than seven hours per day, is associated with increased risk of all-cause mortality.
- Sedentary behavior is also associated with increased risk of CVD and T2DM as well as some cancers.
- Moderate to vigorous physical activity may offset the adverse consequences of sedentary behavior, particularly in individuals who have high levels of sedentary behavior and are also currently inactive.
- Physicians should assess levels of sedentary behavior in every patient and recommend increased levels of moderate or vigorous physical activity, if necessary.

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