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ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional custodians of the Macquarie University land, the Wallamattagal clan of the Dharug nation, whose cultures and customs have nurtured and continue to nurture this land, since the Dreamtime. We pay our respects to Elders past, present and future.

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Isabel Lowe

Publications Officer

Hey!

Welcome to MacPsych's second edition of The Psych Analyst! Our writers and editors have worked tirelessly to deliver engaging and thought provoking insights into a range of psychological phenomena. I'm sure there will be something that appeals to each and every reader! Whether that be techniques for managing the stresses of University (page 55), an insight into setting healthy boundaries (page 15) or an analysis of self-efficacy (page 48).

This edition really does broadcast the incredibly interesting realm of psychology and the many different areas of research. A final thank you to the efforts of our incredible writers and editors!

We hope you enjoy this edition as much as we have!

Isabel

Hello!

I'd like to enthusiastically welcome you to the 2021 Spring Edition of The Psych Analyst. With the weather warming up and the end of the year rapidly approaching once again, it is my hope that you will find the psychological phenomenon discussed in this issue as interesting and motivating as I have. This issue is jam-packed with a diverse range of research-based psychological insights that are sure to capture your interest, whether you're delving into the Benefits of Failure (page 2), or want to learn more about Anchoring Bias (page 11). I'm very excited for you to read about Personality Psychology (page 5), in my interview with expert Associate Professor Simon Boag who is a researcher at Macquarie University.

I hope you enjoy flipping through this edition and learn something interesting to round out the end of the year. Happy reading!

Kayley Zielinski-Nicolson

Publications Official

Kayley

Milena Shvedova

Publications Official

Hey friends!

We're thrilled to welcome you to the second edition of The Psych Analyst! In this edition, our dedicated writers and editors delve into the wonderful science of the human mind. With topics ranging from dreams (page 29), to diets (page 25), to destigmatising psychological intervention (page 34), there's something for everyone. It's our hope that this issue will leave you feeling inspired by the sheer breadth of research going on in the ever-exciting field of psychology. And if you find yourself needing extra inspiration these summer holidays - check out page 22 for some creative activities to fill your time and exercise your mind. I sincerely hope this issue both fuels and quenches your curiosity. Now sit back, relax, and enjoy!

♥ *Milena*



Failure: Success with Spice

Written by Grace Seaglove

Edited by Kathleen Armata

Failure is an ambiguous word defined as “the fact of someone or something not succeeding” (Cambridge Dictionary, n.d.). For students, both high school and tertiary, the word may ring a bell, and perhaps this previous definition has hit a soft spot for some readers. Yet we are taught throughout our years of education that “if you cannot fail, you cannot learn” (Ries, 2011). If this is the case, what ways do we, as humans, respond to the “F-word”? And how can this affect one’s motivations?

The Quadripolar Model of Need Achievement (Covington, 1992) presents four broad categories to pigeon-hole individuals, based on their motives of acquiring success whilst minimising failure. If we were to plot the wise words of Eminem, “success is my only – option, failure’s not” onto this, the Rap God himself may be categorised as a ‘Failure Fearer I’, otherwise known as an overstriver. People as such exhibit high failure avoidance and high success orientation, utilising this fear of failure to fuel hard work and success (Martin & Marsh, 2003).

Funnily enough, overstriver traits tend to be common. Within a student sample, 45% of Aussie university students (Martin, 1998) and 40% of high schoolers (Martin et al., 2001) identified a fear of failure as a driving factor behind the need to succeed. So, what better way to avoid failure than to just...succeed?



Shockingly, success isn’t ALWAYS guaranteed. With this knowledge, we’ve all managed to scrape together acceptable reasoning to soften that metaphorical gut-punch of disappointment – “I didn’t care about the job anyway”, “I was sick that week of the exam”, “the game was rigged from the beginning”.

If these defensive mechanisms strike a chord a little too often, you may identify as a ‘Failure Fearer II’, otherwise known as *self-protectors* (Covington, 1992). People as such usually manage to give reasoning for poor results, whether this be a strategic lack of effort, procrastination, or defensive pessimism. In this case, failure isn’t much of an issue to you, but rather your self-worth and perceived ability are more at risk. By continuing to set that bar low, you might be able to achieve goals, but not to the standard you’re capable of.



Optimists - we all know one. You've missed the bus, the next one arrives in an hour, and it starts raining when you begin the long walk home at some ungodly time of the morning. Suddenly, that one mate who can only look on the bright side acts as a highlights reel, lightening the mood and simmering down disappointment. Their positive outlook seems to have come straight from a Disney movie, overseeing the setbacks with optimism and energy (Covington & Omelich, 1991). Such an attitude is driven by low failure avoidance and high success orientation, and can highlight the surprising benefits of failure. Alleviating one's fear of failure by taking it with a grain of salt shows resilience, redirecting us to our original goals by staying hungry and humble (Waits, 2016). On the flip-side, excessive optimism can push us to work towards fantasy goals that are at best unlikely (Moran, 2020, as cited in Nolan, 2020).

And then we have the failure acceptors - those who have a low fear of failure, and yet no desire to succeed either (Covington, 1992). Despite exhibiting little shame in their failures, they may also show minimal pride in their successes (De Castella et al., 2013). Perhaps they are the fallen soldiers of the high failure-avoider quadrants. As excuses become more implausible, the acceptors live up to their title - they accept their failure (Martin et al., 2001). The silver lining to this accepting outlook isn't initially obvious. But imagine after strenuous hours of effort within a sporting, musical or academic pursuit, you achieve no notable success and have accepted no further outcome.

The surprising benefit of being a failure acceptor reminds us that failure teaches lessons. Unlike the optimists, who risk working towards achieving the impossible, failure-acceptors can act rationally (Martin et al., 2001). By redirecting their ambitions in a productive direction, accepting failure demonstrates that we cannot excel at everything.

So, you've thought about it, nit-picked the qualities and have decided where you fall in your response to dealing with "the f-word". You might've had a cheeky giggle about a time that was not as successful as planned or rolled your eyes at that one miniscule mistake from five years ago. Regardless, failure doesn't have to be the be-all-and-end-all. To quote Truman Capote (1972), "*failure is the condiment that gives success its flavour*".



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Personality Psychology

Interview with an Expert Associate Professor Simon Boag

Conducted by Kayley Zielinski-Nicolson



Associate Professor Simon Boag's key areas of expertise are personality theory and assessment, theoretical psychology, and research methods and he is particularly interested in personality dynamics and the possibility of personality change. Simon has written extensively on psychodynamic theory, dreams, defence mechanisms, and has edited two volumes on psychoanalysis and philosophy of mind. Simon has also written on the history of personality psychology in Australia and edited two books presenting collections of Australian personality research. Currently, Simon is interested in the relationship between personality, health psychology, and responses to the COVID-19 pandemic.

If you are interested in learning more about these psychology research areas, Simon teaches on PSYU2234 Social and Personality Psychology, PSYU3336 Personality & its Disorders, PSYH4464/PSYM7764 - Science and Practice of Psychology in Context, and he is the BPhil/MRes Co-ordinator in Psychology.

In his spare time, Simon can be found engaging in organic & native gardening, running, bushwalking, native bee keeping, and learning German.

Why is understanding personality psychology important to society?

“ Personality psychology...addresses the bigger picture of what it means to be human. ”

Personality is typically defined as the relatively enduring patterns of thoughts, feelings, and behaviours that characterise a person's responses to life situations. The field of personality research is, itself, very broad, extending from genetic and neuroscientific research to the study of interpersonal relationships, along with social and cultural phenomena. Understanding personality helps us to both predict what people do under varying circumstances and to identify the possible causes for this.

There are numerous ways that understanding personality is important to society. Humans are social animals, and personality is important for understanding the different ways that we treat others. Take for instance, what is known as the dark triad of personality. The dark triad involves three socially noxious personality traits: narcissism, psychopathy, and Machiavellianism. A highly narcissistic person has an inflated sense of self-importance and sense of entitlement, along with a lack of both empathy and a capacity for intimacy. Someone high in psychopathy, on the other hand, is a social predator who has a cruel disregard for others and lacks any remorse or guilt for their actions.

Machiavellianism, named after the Italian political philosopher Niccolò Machiavelli (1469-1527), reflects an amoral, manipulative personality trait and someone who is happy to maximise self-interest via deception. Each of these traits alone can be socially toxic, but when taken together, you have an arrogant, callous, dishonest, manipulative, socially malevolent character who will happily cheat and exploit others for selfish gain.



The dark triad has also recently been extended to become the dark tetrad, which includes the three dark triad traits described above, along with the addition 'everyday sadism', a trait associated with enjoying both cruelty and inflicting suffering upon others. Individuals displaying dark tetrad traits can have a devastating impact upon the community, and so understanding why people may be like this, and predicting what dark triad individuals might do, is important for society.

By way of example, consider the internet and cyber-space, where we are all increasingly carrying out our social lives (especially in lockdown). The online world is replete with socially toxic activities such as cyber-aggression, which includes acts such as cyber-bullying and trolling. We know that up to 40% of adolescents report being cyber-bullied, and that the dark triad, and in particular psychopathy, consistently predict who is likely to be a cyber-bully. On the other hand, the dark tetrad is a consistent predictor of online trolling behaviour, where 'everyday sadism' stands out as predicting who will engage in trolling.

Alternatively, understanding personality also provides insight into some of the leading causes of death within the community. In Australia in 2017-2019, the leading cause of death in adolescence and young adults (15-24 years) was suicide (making up 37% of deaths). This is a national community emergency, and something that needs to be urgently addressed. We also know that certain personality disorders and traits are associated with an increased risk of suicide. Particularly noteworthy here is Borderline Personality Disorder (BPD), a disorder characterised by identity disturbances, emotional instability, and a pattern of intense, unstable relationships. Up to 10% of people with BPD die from suicide, and borderline personality traits (where people display borderline characteristics), are also associated with an increased risk of self-harm. In a recent study we conducted using data from prisoner samples, we found that the best predictors of engaging in self-harm were borderline personality traits (out of 29 other known predictors of suicide). This is not to say that all self-harm is related to borderline personality, but what it does mean is that if we can accurately and reliably identify borderline traits, then we can potentially know who might be at risk of increased self-harm and then take precautions to prevent that.



What do you find is the most interesting aspect of researching personality psychology?

There are many aspects of personality psychology that I find interesting, but what I perhaps find most interesting about personality psychology is that in many ways it addresses the bigger picture of what it means to be a human. The major theories of personality, whether they be psychoanalysis or humanistic psychology, are essentially theories of human nature. Such theories have implications for understanding what we can expect from people in terms of either helpful or harmful actions, along with how we might promote the aspects of humanity that we value, and minimise those that we do not.

This makes personality research interesting because it means, when you study personality, that you tend to study basically every domain of psychological research, whether it be neuroscience or social psychology. Furthermore, you are not just trying to understand how any specific 'part' operates in isolation, but instead, aiming to understand how the various parts all fit together to contribute to the 'whole' person. As you may know from your undergraduate studies, the discipline of psychology is made up of various sub-fields, such as perception, neuroscience, and development psychology, all of which make valuable contributions within their specialized domains.



However, personality research is attempting to provide a synthesis of these various areas of psychology and provide us with a view of how these domains all fit and work together to make a complete person. Of course, whether personality theories actually provide a successful synthesis is entirely another matter (but that is also what makes this venture interesting, too!).



Knowing how the various parts fit together to make the whole person is also important for making sense of both psychopathology generally and in particular personality disorders. Personality disorders, which include Borderline Personality Disorder described above, are one of the most debilitating class of disorders and can have devastating consequences for both the individuals involved, their families, and the broader community. The field of personality research itself emerged initially out of what is sometimes described 'Abnormal psychology', and the various theories of personality provide a means for understanding what might go wrong in personality development, along with why therapy might be effective. On the flipside to this, theories of personality also potentially help us to understand what healthy psychological functioning means, and what is necessary for mental health, such as whether we have certain psychological needs that must be met for healthy psychological functioning.

An excellent example of a personality theory that contributes both to understanding both healthy psychological development and risks for developing psychopathology is attachment theory. Although commonly taught in developmental psychology, attachment theory has its roots in John Bowlby's psychodynamic theory, which provided an alternative to the standard Freudian view. Attachment theory has arguably provided us with an understanding of the most important psychological needs in human psychological development, which, when met, help people to lead happy and productive lives, but when neglected, can oftentimes have devastating consequences, especially in relation to traumatisation in early childhood.



What is the most exciting development in current personality research?

There are many exciting things going on currently in personality research. If I had to choose one development, then I think that cross-cultural research in personality would be it. Cross-cultural research is vitally important for a global understanding of humanity. Historically, however, psychology research has primarily occurred in WEIRD contexts (i.e., Western Educated Industrialised Rich Democratic contexts: i.e., Psychology first year students). There isn't anything necessarily wrong with WEIRDs (some of my best friends are WEIRD), but this does raise the question concerning whether our theories and findings apply to other cultural contexts (and we know that it isn't always so).

How might cross-cultural research then relate to personality? One topic of personality research that I am particularly interested in is Dissociative Identity Disorder (DID). DID was formerly called Multiple Personality Disorder, and the individual with DID is said to have various personalities within the one body, each with their own thoughts, beliefs, and memories, and each taking control of the body at different times. DID, itself, is a highly controversial area of research, partly because of the link with childhood trauma. Many researchers in the area believe that severe trauma (such as a child suffering years of sadistic sexual abuse, perpetrated by a caregiver) can lead to an individual's personality fragmenting into more than one identity as a means of coping with the intolerable and inescapable abuse.

One issue here, though, is that most of what we know about DID is from within western contexts, where DID typically manifests as multiple identities. Nevertheless, it also appears that the role of culture is essential for understanding DID. For instance, the latest version of DSM-5 (published in 2013) acknowledged that DID might manifest differently within different cultural contexts.



More specifically, in non-Western contexts, DID may manifest as possession states, whereby the individual gets taken over (i.e., possessed) by some external force, such as a demon or spirit. Possession states might not be something that many of us are familiar with, if growing up here in Australia (at least, not, for me), but the cross-cultural evidence is fascinating here because such states appear to be a basic part of the cultural fabric in many places around the world (including, incidentally, various Western contexts: think exorcism, for example).

In any case, unfortunately, there isn't a shortage of traumatising experiences occurring to people around the world, and this might lead to DID in certain cultural settings being expressed in terms of possession states, rather than as multiple identities. For instance, a 2010 study of 941 adults in post-civil war Mozambique found that at least 18.6% of sample were possessed by one spirit and that a further 5.6% were possessed by two or more spirits. Taken together, this meant that one fifth of the sample were experiencing possession states, possibly indicating a culturally-congruent form of DID in response to traumatisation from the civil war. Of course, demonstrating causality between trauma and DID possession is impossible in such examples, but the possibility that this may be so really needs to be seriously considered.





We are All a Little Biased

Written by Ronan King

Edited by Kathleen Armata

Human existence relies on thinking and decision making; in almost every waking moment in our day-to-day lives, we think and make decisions (Gilovich et al., 2002). These may be big decisions relating to career, education, or relationships. However, often, they are minor decisions. Such minor decisions may include choosing which clothes to wear, making purchases, or deciding which new series to stream. However, whilst we think, evaluate, and make decisions regularly, sometimes even in the heat of the moment, we are unaware of the underlying processes influencing our thinking and decision making. While a snap decision may appear seamless and undemanding, there are many more complex influences on a cognitive level than may meet the eye. Various biases, heuristics, and schemas direct and guide us in such processes on a much more pertinent level than we may initially realise. You could say we are all a little biased.



Within their influential 1974 paper, *Judgement under Uncertainty: Heuristics and Biases*, Amos Tversky and Daniel Kahneman introduced the notion of 'heuristic principles' (Tversky & Kahneman, 1974). Tversky and Kahneman (1974) proposed that heuristics are ingrained rules of cognitive processing that decrease the cognitive demand of evaluations and decisions to provide more energy and time-efficient yet often flawed judgements. These heuristics lead to cognitive biases, categorised by the processes that cause them and their produced effects.

Whilst highly convenient and serviceable, heuristics, and the biases they lead, work somewhat like schema reliant mental shortcuts and are therefore highly prone to error. This raises a rather complex dilemma: whilst we are not in control of our own biases, nor the heuristics that cause them, such heuristics and biases provide efficient thinking and decision making, yet are unreliable. Heuristics and biases are a necessity born out of the evolutionary requirement to conserve mental power and energy, yet their results are flawed. Therefore, a question may be posed regarding the extent to which we genuinely trust our cognition and thought processes. Can we rely on our thoughts and decisions when they are built upon such volatile methods?

One such bias that permeates our standard cognitive processes proposed by Tversky and Kahneman in 1974 is the 'anchoring bias'. Tversky and Kahneman posit that the anchoring bias functions by individuals depending excessively on information initially presented when processing and interpreting subsequent information. When presented with an informative stimulus, or information on which they are to make judgements and evaluations, an individual will 'anchor' to an initial piece of the information. This anchor will then regulate the individual's interpretations and evaluations of subsequent information to match the nature of the information conveyed by the initial anchor. Unless the individual can 're-anchor' to the following information presented, the initial anchor will render one's evaluations, decisions and thinking as biased to the nature or structure of the initial information.

To better explain and discuss the anchoring bias, exploring the initial lab experiment that led to its discovery is beneficial. In a 1974 lab experiment, Tversky and Kahneman investigated an individual's intuitive numerical estimation - an investigation that illustrated the effects of what would eventually become referred to as the anchoring bias. Participants within this experiment were divided into two independent groups, with each group being presented with the same mathematical equation, that of 8 factorial (8!). Both groups saw the equation in its expanded form for only five seconds and were asked within this time to estimate the answer to the equation. However, the critical, independent variable which separated the two groups was that in one instance, the equation was presented in an ascending sequence and the other in a descending sequence.

Therefore, participants in the ascending condition were presented the following ascending variation of the equation:

$$1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$$

Whilst participants in the descending condition were presented with the following descending variation:

$$8 \times 7 \times 6 \times 4 \times 3 \times 2 \times 1$$

Tversky and Kahneman hypothesised that, because humans are conditioned to read from left-to-right in a Western context, participants within the ascending condition would anchor their estimate to the primary piece of information presented, in this case, the number 1. As 1 is the lowest positive integer in the Arabic numeral system, it was assumed that ascending condition participants would estimate a lower value than participants within the descending condition. The opposite logic applied to the descending condition. They would anchor to the number 8, a relatively large number, and their estimate would be higher than the ascending condition participants'. Essentially, participants anchor to the initial information provided, in this case, the initial number in a sequence, and process the following information in the context of this initial anchor, thereby making a biased evaluation (in this case, a biased estimate).



The experiment results confirmed the researchers' hypothesis; the median value of the ascending condition estimate was 512, whilst the median value of the descending condition estimate was 2,250. The actual value of the equation, however, is 40,320. Tversky and Kahneman developed the foundational theory for the anchoring bias from this experiment, as this intuitive numerical estimation study clearly illustrated such an effect.

There are several practical scenarios in which the anchoring bias's effects may be observed or exploited. One worth noting, which you may be familiar with if you shop often, is an exploitation of the anchoring bias commonly utilised by the retail industry (Anderson, 2003). Often, items in supermarkets and stores will be priced down one-to-two cents from the whole dollar to create the illusion that they are cheaper than they indeed are. For example, an item may be priced at \$2.99 rather than \$3.00 or \$29.99 rather than \$30.00. In following the anchoring bias theory, it is understood that a consumer would anchor to the lesser dollar value, such as the \$2 in a \$2.99 pricing tag, thereby evaluating the item to be cheaper than it truly is. This biased evaluation positively influences a consumer's decision to purchase the product, a trick that you have fallen victim to in the past.



Ultimately, human existence relies on thinking and decision making, yet we are often unaware of the cognitive biases and heuristics which influence and dominate such processes (Gilovich et al., 2002). Whilst the anchoring bias is only one theorised cognitive bias of many, it is helpful to keep our cognitive biases in mind and self-criticise when making decisions. After all, we are all a little biased, and knowing as much will help in the long run.



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Where to Draw the Line: The Psychology of Boundaries

Written by Alexandra Charles

Edited by Hira Masood

Research shows that more than half of internet users are concerned about their family and friends posting personal information or photos they don't want publicly shared (Baker, 2021).

Setting healthy boundaries is the ultimate form of self care which sets the tone of how one expects to be treated. Boundaries are described as the line that marks a limit of a subject, principle, or relationship (Soghomonian, 2021). Boundaries impact all areas of life such as work, health, relationships, and even self esteem, which can often lead to emotional burnout if violated. Individuals can distinguish between healthy and unhealthy boundaries by identifying whether they feel energised or deflated once established. There are five types of boundaries which include physical, sexual, emotional, intellectual, and time boundaries.

Physical

Physical boundaries are those which regard your personal space, your privacy, your body, and what you consume (Johnson & Pattemore, 2021). A common example of personal space as a physical boundary is seen through what greeting or public displays of affection an individual is comfortable with e.g. handshake, hugs, or kisses (Johnson & Pattemore, 2021). A way of setting a healthy physical boundary of personal space may involve asking someone's permission before you hug them. Conversely, letting someone stand too close to you on a bus despite there being plenty of room elsewhere is an example of an unhealthy physical boundary as you're not vocalizing your discomfort and consequently disrespecting your space (Wright, 2021). The latter example shows feelings of discomfort when compared to the first example, further demonstrating what equates to a healthy vs unhealthy boundary.



Sexual

Sexual boundaries involve expectations regarding intimacy, consent, physical contact and communications (Lowrance, 2021). Examples of poor sexual boundaries can range from verbal behaviours such as derogatory comments regarding sexualisation in the workplace to physical behaviours including failure to ask for consent prior to engaging in intimate activities. A study on the importance of talking before touching found that participants who listened to an audio recording on date rape before engaging in sexual activity displayed significantly shorter latencies in determining uncomfortable body language in relation to unwanted sexual advances when compared to the no boundary condition which did not involve verbal consent (Winslett & Gross, 2008). An example of a healthy sexual boundary involves openly discussing how far each individual feels comfortable going e.g. first base or second base.

Emotional

Emotional boundaries relate to a person's thoughts, feelings, and physiological responses. Emotional boundaries are frequently seen in areas which include interests, roles, love, and relationships, and concern our sense of wellbeing in how we respond to life events (Samaritans, 2021; Whitfield, 2010). An example of a healthy emotional boundary may involve gradually sharing personal information with a new love interest rather than oversharing on the first date. On the contrary, an example of a poor emotional boundary may involve emotionally dumping your problems onto another person without clarifying whether they have the mental energy to listen (Lowrance, 2021).



Intellectual

Intellectual boundaries are boundaries that concern one's thoughts, ideas and beliefs. Understanding that individuals have beliefs, opinions, and desires different from one's own mental state is a concept first identified by Premack and Woodruff in 1978 known as 'theory of mind'. When someone dismisses another person's opinions and beliefs intellectual boundaries are violated e.g., religious views by projecting their own (boundary invasion). Deficits in understanding theory of mind e.g., decoding and reasoning, as commonly seen through individuals experiencing severe depressive symptoms, can significantly impact one's ability to respect intellectual boundaries (Lee et al., 2005; Washburn et al., 2016). This is alarming as depression is the most common mood disorder in Australia (Australian Bureau of Statistics, 2007). When conflicting opinions arise, an important question to ask yourself is "do I know enough about this topic to express my opinion?" If not, an example of a healthy intellectual boundary may involve admitting your lack of knowledge and not falsifying information (Wright, 2021).

Time

Time boundaries involve appropriately allocating time for oneself and others. According to one systematic review “one individual cannot exist in two places at one time and therefore has to allocate his path in time-space” (Adams, 1995). In other words, individuals are unable to multitask and hence must prioritize time to complete all tasks. Time boundaries can be internally related e.g. allocating time each day to partake in an enjoyable activity such as reading. On the other hand, time boundaries can be externally related e.g. communicating to work clients that your only available times of contact are within business hours (Katherine, 2013).



Ultimately, boundaries are imperative to maintaining healthy relationships with ourselves and others. Absence of setting boundaries often leads to fragmented relationships and emotional burnout. Individuals can improve physical, sexual, emotional, intellectual, and time boundaries by actively reflecting and questioning their own values in conjunction with where they feel appropriate lines should be drawn. Although setting boundaries may be uncomfortable and confronting, boundaries are key to creating a healthy form of self care.



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Can an Increase in Vitamin D Lead to a Happier Life?

Written by Sienna Anderson

Edited by Kathleen Armata



Vitamin D is the vitamin that controls the calcium levels in your blood. It is necessary to ensure that your body is functioning correctly by keeping your immune system strong, your bones healthy, and your insulin levels regulated (Better Health Victoria, 2018). But what does this have to do with happiness? Well as it turns out, studies have indicated multiple areas where vitamin D can have an effect on the brain, including areas connected to mental health and an individual's happiness levels.

There have been many studies on vitamin D which suggest a variety of cognitive and mental health benefits. These studies look at how a lack of vitamin D can lead to poorer mental health, and an increase in intake can lead to a significant improvement in the areas that follow:

Productivity

A study by Fitzgerald and Danner (2012) investigated the effects the evolutionary psychology approach had in the workplace. One of the strategies they investigated was to increase the participants' intake of vitamin D. Overall, the results of this study showed that by using this strategy, among others, the overall productivity of the workplace increased.

Mental Health

It has been shown that those who have a low intake of vitamin D have poorer mental health scores (Motsinger et al., 2012). Additionally, studies suggest that there is a statistically significant improvement in an individual's mental health when taking vitamin D supplements (Gugger et al., 2019). A combination of these results suggests that the effect of vitamin D on mental health is significant.

Life Satisfaction

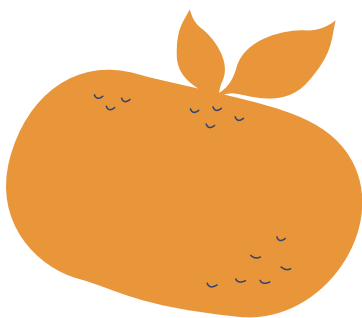
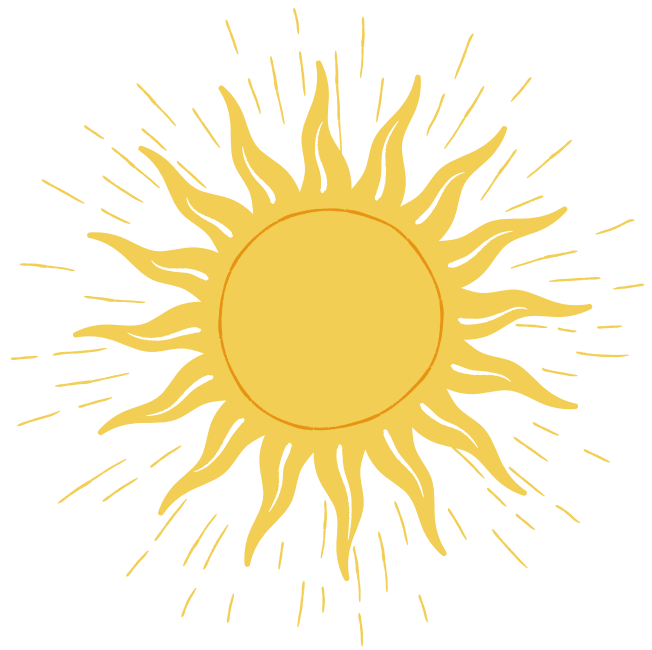
Studies have suggested that a lack of vitamin D can lead to poorer life satisfaction which can have detrimental effects on the individual and their enjoyment of life. For example, Umhau et al. (2013) found that low vitamin D is associated with higher suicide risk. Increasing vitamin D intake can assist in reducing these risks and may contribute to a more satisfying life overall.



Right now, you might be wondering how you can go about increasing your vitamin D intake. The good news is there are actually a variety of ways depending on what best suits your lifestyle (De Coster, 2017).

The Sun

One way to get vitamin D is through UVB radiation such as what you get when exposed to sunlight. Studies have shown that spending around 2 hours outside each day can help increase the vitamin D in your system and lead to significantly higher well-being (White et al., 2019). However, it is very important to be careful and follow guidelines to safely enjoy the sun and avoid too much exposure. (Elwood & Jopson, 1997).

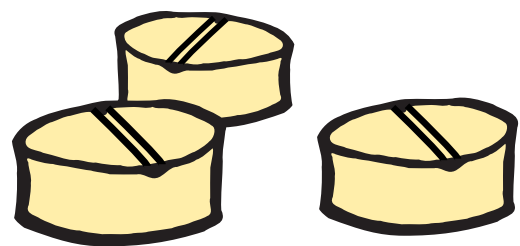


Supplements

There are of course supplements if the other options aren't available, however it is important to always consult a doctor before starting a new supplement as it may not be the right choice for you.

Food

Vitamin D can also be found in a range of foods such as seafood, red meat, eggs, and dairy. For those who prefer not to consume animal products, mushrooms and fortified foods including cereals, orange juice, and plant-based milks also contain the vitamin D we need.



Overall, findings suggest that vitamin D can have a variety of benefits and lead to a happier and healthier life by increasing your productivity and improving your mental health and life satisfaction. To achieve these benefits you can increase your intake using sunshine, food, and supplements.

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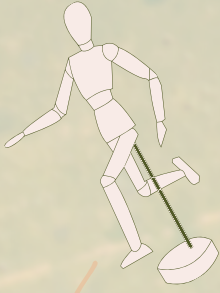
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CREATIVE CATHARSIS



By Milena Shvedova

**Looking for ways to get creative, but you're not sure how?
Want to pick up a new hobby, but you're not sure which?
Seeking new ways to relax, but you're not sure where to start?**

Art as a therapeutic method has been employed by scores of practitioners to assist clients in expressing and articulating feelings (Liebmann, 2015).

Although creative processes as therapy can only be implemented under the direction of a qualified therapist, independent art-making has also been known to improve mood through catharsis, redirection and expression (Drake et al., 2016; Petrillo & Winner, 2005).

Here are just some of the many ways you can relax, unwind and get creative from home!

Clay Sculpting

Not only is clay sculpting a great excuse to get messy, but literature suggests that it stimulates sensorimotor processes, activates memory systems and significantly improves emotional state (Suputtitada, 2021).

Types of clay to explore can include (Homestratosphere's Editorial Staff & Writers, 2021) :

- Polymer clay
- Air-dry clay
- Plasticine-type clay

Once you have your clay, try your hand at making:

- Some jewellery beads
- A mug (Does it have to be functional? No!)
- A plant pot, for all those extra plant buddies you formed during lockdown...

Remember, it's all about the process... and Youtube tutorials are your best friend!

Insider tip: If you're baking polymer clay, follow the timing instructions on the packaging... trust me.



Acrylic Pouring

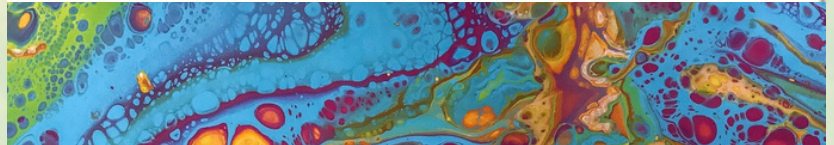
Not only is this a relatively skill-free activity, but this abstract form of art making has also been known to significantly decrease stress levels (Reight, 2020).

The acrylic pouring technique involves letting acrylic paint flow freely across a canvas with the help of some extra mediums. Sounds soothing, right?

What you'll need (The complete acrylic pouring techniques guide, 2019):

- Acrylic paint
- Pouring medium (floetrol is commonly used)
- Silicone oil (this adds the characteristic 'bubbles')
- A canvas

Insider tip: For a more chaotic pattern, once the paint is poured and the bubbles are forming, try pulling a string across the canvas!



Collaging

An easy way to use up the scrap bits and pieces you have lying around, this method of art making is inherently constructive and reflective. Due to this, collaging has been known to assist in transforming thinking and making tacit knowledge explicit (Simmons & Daley, 2013). Expressive arts such as collaging may also assist in exploring and relieving emotion through symbolic and metaphoric imagery (Adibah & Zakaria, 2015).

For this activity, all you need is a pair of scissors, some glue and some scrap paper. The paper can be from a magazine, newspaper, or even an old book!

Choose any images, photos, words or letters you want to incorporate in your final piece, and get glueing!

Insider tip: Try collaging as a form of study! Handwriting, transcribing and organising your notes into a collage with visual aids may assist in later recall (Rich & Blake, 1994).





Embroidery

There is growing speculation that embroidery improves mental wellbeing in a holistic manner (Bäckström, 2020). This literature suggests that it can be used as a tool to express mental and physical feelings, as well as create meaning in a constructive manner.

It may be daunting to start an embroidery project as a beginner, so you might consider purchasing a kit to get you started. These will normally include:

- An embroidery hoop
- Embroidery thread
- An embroidery needle
- Fabric (often with a pre-traced template)

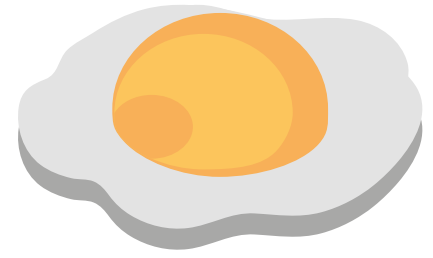
Embroidery can be a time-consuming process, meaning you can pick it up and put it down at your leisure.

Insider tip; You may be tempted to use a long thread for weaving, however, this can lead to extra tangling and frustration. Keep it shorter!

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Diets vs. Mindful Eating: Which Prevails in a Growing Push for Healthy Bodies?

*Written by Ivan Coetzer
Edited by Lynette Elias*

Understanding how food will make us feel can be tricky business. There are almost as many diets in existence as there are people (just kidding), but seriously, the task of selecting, deciding, confirming, trusting and indeed carrying out your chosen diet is no simple task. It may take several conversations with friends and co-workers before one can finally decide: What diet am I going to go on? But, what does psychological research suggest?

It's no secret: diets don't work out for a great deal of people. The last couple of years in nutrition and diet culture have been incredibly fast paced. We have welcomed and said goodbye to a multitude of unworkable diets, and much to the desire of diet go-getters, there is a new kid on the block - hello mindful eating!

We know diet culture is no joke, in fact, in 2019 the US Diet and Weight loss industry reached a worth of \$78 billion (Marketdata LLC, 2021). This last year, with our on-going global pandemic, there has been a 21% decline in this industry (Marketdata LLC, 2021). According to the same source, this decline saw a 37% decrease on health clubs (hello lockdowns) and a further reduction of 27% on medical weight loss programs. Interestingly, these so-called 'diet and health' promoting programs have also been labelled as leading to failure approximately 95% of the time (Sharma et al., 2011).



Engaging in mindful eating appears to be a long term, feasible, healthy eating approach. Furthermore, the continual decline in diet popularity has been met with a different movement; the movement of finding health at every body shape and size.

One randomised controlled trial placed 194 adults with obesity (78% women) into two groups (Daubenmier et al., 2016). Both groups participated in a program involving a healthy diet and exercise. One group also engaged in mindful eating techniques. As you might have predicted, after 12 months the mindful eating group showed a lower intake of unhealthy sweets compared to the control group. However, there was not a large difference in weight fluctuation between the two groups. Furthermore, the group that engaged in mindful eating lost more weight than the control group (Daubenmier et al., 2016). Thus, mindful eating techniques appear to be a useful and feasible approach to achieving healthy, sustained weight loss.

Living out the four core values of mindful eating; what to eat, why we eat what we eat, how much to eat, and how to eat, (Harvard T. H. Chan School of Public Health, 2020) is both positive and affirming. This promotes healthy body image, builds self esteem, and encourages feelings of contentment that are more facilitative of lifestyle changes (Tylka et al., 2013).

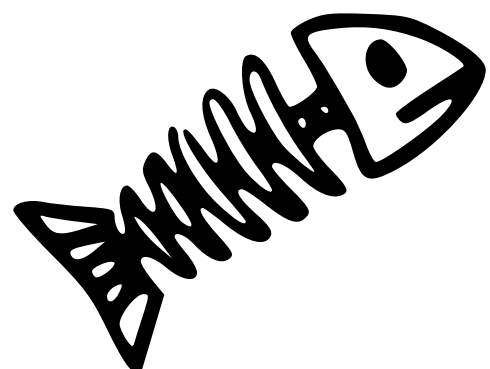


Food Wastage

An American based study found that the average person in America wastes about 450g a day in food (Conrad et al., 2018). Interestingly, as our diets become healthier, our wastage of food actually increases, and so too a larger use of agricultural irrigation water and pesticides (Conrad et al., 2018). Food wastage within America has been broken down through a cross-sectional analysis that is repeated yearly with five thousand individuals. The survey specifically reports on what food goes to waste.

Food Wastage Broken Down to 5 Groups (Conrad et al., 2018):

1. Mixed fixed and vegetables 39%
2. Dairy 17%
3. Mixed meat dishes 14%
4. Grains and grain mixed dishes 12%
5. Other foods (ranging from candy, soft drinks, salty snacks) 10%



If you are on the hunt for being an active preventer of food waste, the starting point can be a blurry line, but simple initiatives such as:

- Didn't make it to the end of your meal? Not a problem, save it for later!
- Think a food has gone past its use by date? Make sure you read the label right! You'd be surprised that a lot of food is thrown away simply because the date is read wrong.
- Purchase fruits and vegetables in smaller quantities, as to prevent fruit going off before you get to it (Conrad et al., 2018).

There you have it: diets are fading, mindfulness is coming in and is here to stay. Mindful eating appears to be a great approach to develop and maintain a healthy relationship with food and your diet. And don't forget, to consider the environment when planning and disposing of meals!



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Deep Sleep and Meaningless Dreams: Understanding the Science Behind Dreaming

Written by Jake Elgalada

Edited by Lynette Elias

Dreaming has informed the beliefs and practices of early cultures (Jung & Hull, 1960), and the self-understanding of individuals. For much of history, dreams have been seen as visions or messages from God or from the other realm, having some sort of superordinate and spiritual origin. Even today, dreaming is assumed to be directive of some sort of meaning (Windt, 2013).

So do dreams possess any innate meaning and if so to what extent? Are dreams latent with symbolic content, or is it the conscious mind which imposes meaning on what is inherently meaningless?



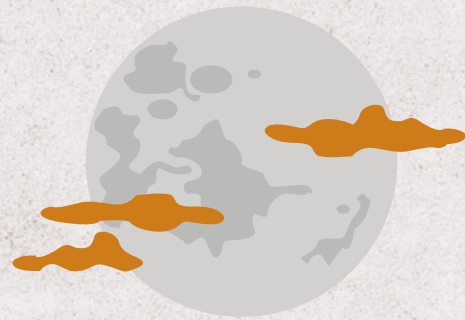
The scientific investigation of dreams begins with the Freudian school of psychology. The publishing of the essay 'On dreams' in 1901, defined dreams as interpretable and intentional creations, despite their nonsensical content. Dreams are considered an alternative thought process through which rejected thoughts and desires transform and are presented to the subject, or as Freud put it, dreams are 'disguised fulfilments of repressed wishes.' (Freud, 1953). However, despite its influence on popular understandings of dreams, are Freud's explanations entirely accurate? According to the dominant findings of today's psychology research, likely not. The psychological discipline today is contrary to many of Freud's conceptualisations (Solms, 2018), and the literature on dreams reflects this. Much research suggests that dream may only be 'epiphenomenal' (Hobson & McCarley, 1977; Metzinger, 2011).



The most prominent of these ideas is the activation-synthesis model of dreaming, as conceived by Hobson and McCarley (1977). REM sleep, or the ARAS (ascending reticular activation system) found within the brainstem, is associated with dreaming (Angeles et al., 2010). The result of all this activity is the activation of the frontal brain, which reflects 'basic consciousness'. Dreaming and the weird imagery associated with it, are the result of the brain attempting to make sense of active consciousness during the sleep state (Hobson & McCarley, 1977; Solms, 2000). The peculiarity of such images are formed by the chaos that the forebrain undergoes (Angeles et al., 2010; Hobson & McCarley, 1977; Solms, 2000). Feelings of flight in some lofty dreams, may actually be a result of an activated motor and visual cortex, stimulated and connected by these brainstem impulses, rather than the revival of some suppressed desires as Freud proposed. Thus, the contents of dreams may be an epiphenomenon of active brain stem impulses, synthesised by the forebrain during sleep (Hobson & McCarley, 1977; Solms, 2000).



Although all-encompassing and essentially commonplace in dream discussion (Metzinger, 2013), the REM (or activation - synthesis) hypothesis does have some key flaws. For instance, although lesions in the pons result in the cessation of REM sleep as typically recorded, dreaming is still maintained (Solms, 2000). Many Freudians and Neo-Freudians view this as a simplification of the issue (Leader, 2020). Certainly, relegating dreams to a 'tangent of evolution' (Metzinger, 2011, pg 153) is pretty unsatisfying. But is there any neurological proof against it?



Modern psychoanalysts have attempted to find compromise and compatibility between these two schools - mostly in reaction to the activation-synthesis model. Mark Solms, attempted to evoke the Freudian model in neuropsychic investigations by providing Neo-Freudians with some empirical support. According to Solms, dreams appear neurologically linked to motivation. This may be demonstrated by routes of dopamine travelling from the basal ganglia, or substantia nigra, outwardly to the frontal brain, towards such structures as the thalamus and parietal temporal lobe (Angeles et al., 2010; Solms, 2011). The travel of dopamine may form the biological roadways of dreaming, working to form the conscious movements within sleep (Angeles et al., 2010; Llewellyn, 2013).



In addition, several of the key 'unique features' of dreams are linked to milestones of these dopaminergic pathways. The anterior and lateral thalamic nuclei for instance, when lesioned lopsidedly causes nightmares and negative emotions within sleep states which could account for the emotional significance of dreams, for which Freud attributed to the build-up of guilt and anxiety (Freud, 1953). REM itself is a tangential phenomenon rather than the key force behind dreams. The key takeaway from all this is that dreams are not meaningless, but rather under the correct neurological conditions, can take the form of latent content and act out sub-structural desires (Freud, 1953; Solms, 2018). Unlike classical psychoanalysis however, dreams may not be intrapersonal fantasies, the externalising of psychic conflicts, or insights into selfhood (Leader, 2020). Dreams are biological in content and as such are the manifestation of biological mechanisms. Symbolic contents may be constructed facades for which unrelieved biological desires can be relieved, almost in the way Freud imagined the concept of cathexis, the idea that mental energy can be directed and attached towards a mental object.

Although Solms's theory of dreams should be a dream to all Freud enthusiasts, such a sentiment is not held, and not much amiability stands between self proclaimed 'Neo-Freudians' and those more traditionalist (however traditionalist a Freudian can be). For instance the conception of dreaming as biological satisfaction is criticised by the psychoanalyst and philosopher Slavoj Zizek, for missing out on the crucial element of intersubjectivity (Zizek, 2018). Taking inspiration from the French psychoanalyst, Lacan intersubjectivity refers to the symbolic or virtual factors which structure an object, which inform our experience of ordinary objects.

Take for instance Freud's account of his daughter's dream, a dream in which his daughter fantasised consuming a countless number of strawberries. Of course this dream may be analysed as a simple expression of unfulfilled hunger, as Freud and Solms would prefer. However Zizek emphasises a specific aspect of the dream, the fact that her parents were too a part of the dream, expressing enjoyment as she virtually consumed the strawberries (Zizek, 2018). This confusing feature, the enjoyment of the parents, is the centre of fulfilment, as opposed to the berries themselves (Leader, 2020; Zizek, 2018). The dream's 'intersubjectivity' is considered the transformation of the objects into social symbols, for which the subconscious facilitates. This could suggest that the subconscious is its own language, and dreams are its voice (Leader, 2020). Dreams reveal and are a part of the network of social symbols we live by unconsciously. Despite being wonderfully complex, the ideas of Zizek and other Lacanian successors are still very much a product of speculation and require further neurological research.

Another prominent voice who has brought the issue of dreams to life, has been the German philosopher Thomas Metzinger. Although being a philosopher, Metzinger is concerned with mainly neuropsychological issues and methodologies. What his obtuse writing amounts to is a phonological definition of dreams. Dreams are, in Metzinger's (2013) estimation, a unique form of self-consciousness, much like the other thinkers we have discussed. Metzinger (2013) proposes that dreams are the basis for studying subjectivity, seeing it as the gateway to understanding the 'minimal phenomenal selfhood' (MPS), or consciousness beyond the 'I' (Metzinger, 2013). MPS, the lowest layer of consciousness (Metzinger believes there are many), refers to any experience which is solely spatiotemporal. Think of any out of body experience, or even lucid dream - the awareness of place and time in both is an instance of MPS. Metzinger (2013) believes dreams play with consciousness and shape it into many different forms, such as MPS. While dreams may not mean anything themselves, they may be constructed out of this phenomenology and could be the gateway into understanding how consciousness truly works and is formed.

To conclude, dreams are a complicated phenomenon and many competing voices bicker over the question of *what* they really mean or *whether* they really mean. The primary competition between traditional Freudians and biological realists - between those who view dreams as central to the mind and those who see it as a tangent - shows us just how incomplete our understanding is. Although the sciences have revealed to us a new map on how dreams appear to work, the mechanisms of this are speculative and our understanding can be undermined at any time as new data is revealed and new maps are devised. However, the direction of dream research is progressively forming a more complete idea. More research is need to develop a concise and accurate understanding of dreams.



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Figure 1: Into Action (n.d) Asking for help is a sign of strength. Into Action. <https://library.into-action.us/media/8gionalgrihkytmbb/>

Psychological Intervention: Why You Should Not Feel Scared or Ashamed To Receive it

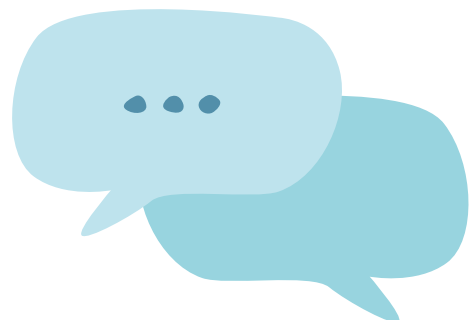
Written by Elise Hodgson

Edited by Hira Masood

In the 2017/18 Australian National Health Survey it was found that one in five Australians reported they had a mental or behavioural condition with the highest proportion being 15-24-year-olds. (ABS, 2018).

So many people experience mental illness yet it is still something that is stigmatised in society. In Australia this stigma comes from the public perception of mental health (Australian Government Productivity Commission, 2020). Prejudiced views and negative attitudes towards those with a mental illness can cause internalisation of these views, which negatively harm one's sense of self (Corrigan & Watson, 2002). People living with a mental illness are more excluded from society (Australian Government Productivity Commission, 2020). Even those without a clinically diagnosed disorder still have the capacity to be negatively affected by their mental health (COAG Health Council, 2017).

The shame experienced after receiving treatment should not deter us from actually seeking it because it can help improve our lives more than people may expect. The likelihood of becoming worse after psychological intervention is very low, meaning it is more likely that there will be an improvement or no change (Pybis et al., 2017). In recent years the approach of treatment has moved from reducing symptoms to maintaining positive mental health. Many different interventions reflect this approach and have been found to be effective (Haeyen et al., 2017). The more that is shared about the benefits of psychological intervention the more it will be seen as normal and not something to be scared of.



In a meta-study where seven different psychotherapies were compared for their effectiveness in treating depression, it was found that they all had about equal effectiveness (Cuijpers et al., 2008). There are many therapies that have been found to be effective for most people, meaning that there are a lot of opportunities for success with the guidance of a psychologist. The likelihood of worsening symptoms following psychological intervention is quite low in comparison to not receiving any treatment at all. Not much data has been gathered on those that do not receive intervention when needed, so it is difficult to say for sure (Cuijpers, 1998). Researchers could use the drop-out rate to assess how many people are refusing treatment and try to gather data from them (Cuijpers, 1998). However, there are multiple factors that could influence drop-out, meaning it may not be the most accurate measure. What we have some more certainty on is that the majority of those who do receive treatment either do not change or they reliably improve, which is important (Pybis et al., 2017). With continued education to change prejudiced perceptions on mental health, hopefully more people will be inclined to seek help when they need it, because the benefits are overwhelming.



Another more alternative therapy that has been researched is art therapy, which aims to improve personal wellbeing and promote positive change through various art assignments (Haeyen et al., 2017). These assignments are aimed to “improve mindfulness, self-validation, emotion regulation skills, interpersonal functioning, and insight and comprehension” (Haeyen et al., 2017, p. 12). It was found that this therapy was helpful not only in furthering positive mental health but also for reducing symptoms in participants with personality disorders (Haeyen et al., 2017). This study only tested the therapy on participants with a personality disorder, meaning it may not be generalisable to all mental illnesses. But the results are still promising because this was a new finding, as art therapy had previously been thought to only foster positive mental health (Haeyen et al., 2017).

This is exciting as a psychology student because it demonstrates that there is still more that can be discovered and improved within the field of mental health. There is continued research on how different therapies can be adjusted for different groups of people, meaning its effectiveness should continue to increase as more is known about the specific mechanisms at play (Cuijpers, 1998). Even with all of these effective therapies available, stigma is still affecting how people access them. A study conducted in a rural town found that people were more likely to seek help from their GP if their perceived stigma of mental health was lower, well as believing biological rather than person-based causes for schizophrenia (Wrigley, et al. 2005). This information tells us that more still needs to be done in the education of mental illness causes as well as stigma reduction so that people are able to access these therapies without shame.

The view on how mental illness is treated has shifted from reducing symptoms to improving positive mental health (Haeyen et al., 2017). The way that mental health has been defined as a positive maintenance process instead of 'fixing' symptoms helps to demonstrate that mental illness is something that is normal and can be lived with (Haeyen et al., 2017). This has assisted in destigmatisation. Positive mental health includes both feeling good and functioning well, psychologically and socially (Trompetter et al., 2017). This change in viewpoint was likely because of the connection between mental illness and mental health. Even if someone does not have a mental illness it does not mean they experience positive mental health, and vice versa (Westerhof & Keyes, 2010). Recent research has suggested that positive mental health helps to reduce the likelihood of psychopathology, because of its positive correlation with high levels of self-compassion (Trompetter et al., 2017). Self-compassion involves kindness to the self, having the ability to recognise the commonality of failure and imperfection, and mindfulness skills to separate feelings from the self (Neff 2003a, 2003b). These traits are ones that are usually learnt through psychological intervention to promote a positive change in symptoms (Trompetter et al., 2017). More still has to be done to promote this viewpoint of mental health maintenance into societal norms, but this definition change is definitely a positive start.

The stigma against mental health is not one that will be quickly removed, but through more people discussing it and being informed, one day it will hopefully become the norm to talk about mental health more openly. Mental illness is continuing to rise and become even more common, but there is hope for one to be able to live comfortably. There are many different psychological interventions that have been researched that a psychologist could use, but more still needs to be done in terms of identifying how certain therapies could be more effective for certain types of people, not just the disorder in general.

If you or someone you know needs help, here are some resources you could use:

- If you are in immediate danger, call 000
- Mental Health Line: 1800 011 511
- Kids Helpline 1800 551 800
- Lifeline: 13 11 14 ,
<https://www.lifeline.org.au/get-help/>
- Beyond Blue: 1300 22 46 36 ,
<https://www.beyondblue.org.au/who-does-it-affect/young-people>
- Head to Health
<https://www.headtohealth.gov.au/>



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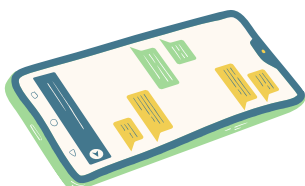


Telecommunications and its Transformation of Mental Health Services

Written by Zac Stritch-Hoddle
Edited by Lynette Elias



The National Health Survey reported that around 1 in 5 (4.8 million) Australians described themselves as suffering from a mental or behavioural condition between July 2017 and June 2018 (Mental Health, 2021). With the addition of the COVID-19 pandemic, more Australians are experiencing mental health crises than ever before. Since mid-March of this year, Australians have accessed 5 774 696 mental health services covered by Medicare (an increase of 9.2% compared to the same time last year) with an average wait time of over 6 weeks to reschedule a pre-existing appointment (Manfield, 2020). Mental health hotlines like Beyond Blue, Kids Helpline, and Lifeline have seen a 26% average increase of contacts in NSW across all services when compared to contact rates from 2019 (Mental Health Services in Australia, COVID-19 Impact on Mental Health, 2021). This surge in demand for mental health services during the COVID-19 pandemic has directed the Australian government's attention towards the possible subsidy of telehealth psychology.



In the Australian Association of Psychologist's pre 2021-2022 budget suggestions for Medicare, telepsychology was recommended to become a permanent option for patients (Carrison, 2021). This would increase access to mental health services for Australians indefinitely, solving a myriad of accessibility issues that are present in the current mental health system. One of which, is rural Australians with an 11% higher rate of committing suicide in comparison to the national average. In a study of 3163 suicides of rural Australians between 2010-15, 24% had undiagnosed symptoms of a mental health condition. In the 6 weeks before suicide, 22% had only visited a mental health service once and 6% who had visited two or more (Fitzpatrick et al., 2021). In addition to lack of accessibility, there is great stigma surrounding mental health issues, and treatment, in rural communities. There is an emphasis on self-reliance, stoicism, and not discussing personal issues that creates social obstacles in the way of accessing treatments (Vines, 2011). By subsidising telehealth psychology, members of rural communities will have much better access to mental health services, without a perceived change to their social or personal identity.

Not only is a telehealth revolution needed for rural Australians, but would also greatly improve access for Australians living with physical disabilities. Transport and accessibility requirements create frustrating and demotivating obstacles for many physically disabled Australians, stressing the need for flexibility of location of psychological services (ACT Council of Social Service Inc., 2017). Telepsychology would make mental health services more convenient and accessible for people with disabilities, decreasing obstacles in the way of mental health treatment and increasing independence for Australians living with disability. Although more work needs to be done to increase accessibility for individuals with auditory, visual, or cognitive disabilities, there is ample opportunity for an increase in convenience, and overall accessibility, of mental health services for those who previously struggled for recognition and quality mental health treatment.

The inverse care law states, “The availability of good medical care tends to vary inversely with the need for it in the population served.” (Hart, 1971, p. 1). It is unfortunate to see these disparities become even more pronounced in a time where under-cared individuals need it most. It is time we change the mental health system for the better, to revolutionise access to mental health services through telecommunications for all.

If you or someone you know needs help, here are some resources you could use:

- If you are in immediate danger, call 000
- Mental Health Line: 1800 011 511
- Kids Helpline 1800 551 800
- Lifeline: 13 11 14 ,
<https://www.lifeline.org.au/get-help/>
- Beyond Blue: 1300 22 46 36 ,
<https://www.beyondblue.org.au/who-does-it-affect/young-people>
- Head to Health
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An Autistic Psychology Student's Insights into Autistic Mental Health

Written by Caitlin Savins

Edited by Grace Ma

Among the many psychology students currently undertaking study at Macquarie University, there are most certainly some among us who are interested in contributing to the wide world of autism and mental health research. You may be wondering what on earth you could contribute. Is there even anything left for you to research?

Firstly, the bad news: Autistic mental health has been found to be significantly poorer than the general population.

However, the good news is that there are many research opportunities available to make significant improvements to the autistic population's mental health.

Additionally, Freeth et al. (2012) found autistic university students likelier to report higher levels of generalised and social anxiety.

Why is Autistic Mental Health So Poor?

Researchers have put forth some ideas to explain this:

- Limited faith in professionals' capacity to differentiate autistic and mental illness traits (Au-Yeung et al., 2018; Camm-Crosbie et al., 2018).
- Low external and personal acceptance, and maintaining cognitions and behaviours (Beck et al., 2020; Bradley et al., 2021; Hull et al., 2021).
- High levels of stress caused by being a member of a stigmatised minority group, referred to as minority stress (Botha & Frost, 2018).
- Difficulties in seeking mental health support, such as accessibility issues on both smaller and systemic scales (Cage, Di Monaco, & Newell, 2017; Maddox et al., 2019).
- Increased likelihood of experiencing adverse life experiences, like financial exploitation and hardship (Griffiths et al., 2019).

So, what can a psychology student interested in research about the autistic experience do?

Conducting Research into Autistic Presentations of Mental Health Conditions, And Developing Specific Inventories for Autistic Clients

Autistic people often contend with knowing more about autism than the professional who is treating them. Due to low confidence in mental health professionals' capacity to distinguish autistic and mental illness traits, autistic patients are likelier to distrust diagnoses (Au-Yeung et al., 2018). Autistic clients may also be misdiagnosed and provided with unnecessary treatments due to overlaps in diagnostic criteria, such as difficulties in understanding and responding to emotions and struggles with interpersonal functioning which is common to both autism and borderline personality disorder (Dudas et al., 2017).

Some researchers have tested the appropriateness of using current inventories or created specially designed inventories, with the following findings:

- Cassidy et al. (2018) and Williams et al. (2020) found the Beck Depression Inventory II (BDI-II) to be a valid measure of assessing depression in autistic adults.
- Rodgers and colleagues (2020) found the Anxiety Scale for Autism – Adults (ASA-A) to be a valid measure of assessing general anxiety in autistic adults.
- In a systematic review, Rumball (2018) found reliance on clinicians' judgment led to poor inter-rater reliability of post-traumatic stress disorder assessment and diagnosis.



A researcher wanting to contribute to the world of autism research could potentially develop an inventory for the assessment of PTSD in autistic people with higher inter-rater reliability than the judgements of individual professionals (Au-Yeung et al., 2018). Increasing inter-rater reliability here allows more holistic communication between specialists when treating autistic patients, and the easier identification of autistic clients, enabling clinicians to commence preventative therapy (Lobregt-van Buuren et al., 2021).

Alternatively, the researcher could test the applicability of current psychometric assessments of personality to autistic populations to explore the extent to which autistic people's personalities are impacted by their neurology.

Construct validity of these measures is threatened by the inclusion of questions pertaining to individuals' tendencies to seek or withdraw from social interaction and capacities to cope with change. Is this reflective of autism, or of personality? Research in this area may not only allow for the greater understanding of the interactions between neurology and personality, but additionally allow for the identification of personality dimensions which have protective or aggravating influences on the development of mental health issues. This may include neuroticism and extraversion and could additionally have implications for tailoring healthcare information to autistic people to the level of their specific trait variations.



Increasing Clinicians' Knowledge and Understanding of Autism and Common Comorbid Mental Illnesses Through the Creation of Educational Programs and Initiatives

The high rates of misdiagnosis of mental health conditions and the lack of confidence autistic patients have in the clinicians treating them could be mitigated by providing educational programs and initiatives designed to increase clinicians' understanding of mental health conditions that are frequently comorbid with autism.

Researchers have tested programs and conducted qualitative research on what autistic people feel is lacking in current interventions to bridge the gap between what professionals need to know and what they currently know. The findings concluded that:

- Professionals should be encouraged to undertake coursework and practicum during post-secondary study and professional development to gain an understanding of the autistic experience (Maddox & Gaus, 2019) and increase self-efficacy when working with autistic clients (Cooper et al., 2018).
- Mental health professionals' self-confidence in treating autistic patients varied, with a need for training and ongoing supervision to increase confidence (Cooper et al., 2018), and Williams and Haranin (2016) found only half of the American mental health practitioners surveyed had professional training in autism, and only half felt confident enough in their knowledge to diagnose mental health disorders and provide therapy.

- American general practitioners who participated in a Project ECHO program where they had access to autism experts reported increases in perceived knowledge of autism, self-efficacy, and problem-solving skills when working with autistic patients (Dreiling et al., 2021).
- Benevides et al. (2020) emphasised the importance of working with autistic people to determine preferred wellbeing outcomes, and testing current strategies on their capacity to generate those outcomes (Benevides et al., 2020).

In Australia, Project ECHO (Extension for Community Healthcare Outcomes) has shown promise in the Sydney Local Health District in aiding GPs in improving their knowledge of and confidence in treating general mental health, adult eating disorders and adult intellectual disability mental health. Research could determine if the conclusion from Dreiling's (2021) Project ECHO program undertaken in the United States can be replicated in the Australian mental health care system, which is comparatively more affordable and accessible. This program would additionally allow general practitioners, whose services provide a significant proportion of autistic patients' mental health care (Foley & Trollor, 2015), to expand their capacities to confidently provide care.



Preliminary findings from pilot programs are promising: rural Australian support workers (Johnson et al., 2020) and Ethiopian clinicians (Zelege et al., 2020) reported greater confidence in their knowledge.

Pilot programs may also focus on aiding clinicians in developing capacities to aid patients in the creation of protective capacities and traits, like positive autistic identities (Cooper et al., 2017) and self-compassion (Cai & Brown, 2021). Foley and Trollor (2015) identified a value for neurodiversity as necessary for caring for autistic clients, necessitating community inclusion and general positive reframing of autism.

Finally, further research could test the capacity of the Australian mental health care system in maximising the wellbeing of autistic patients in the system against community-chosen outcomes, and to identify areas requiring improvement and recommend strategies. This may be done through case studies involving autistic participants who are reliant on bulk-billed mental health care, or through qualitative questionnaires analysed conceptually for recurrent themes.



Building And Extending Upon Current Research on Best-Practice Professional Interventions for Autistic Clients Presenting with Mental Health Conditions

Which psychotherapies and interventions work, and which ones don't? Though current evidence is limited, recent research has found:

- A review by Spain et al. (2015) found that while Cognitive Behavioural Therapy (CBT) was generally effective in treating comorbid anxiety and depression in autistic adults, there were methodological issues such as small sample sizes, highly varied participant characteristics, and self-reporting measures.
- Adaptations to CBT protocols are necessary to maximise its benefit to autistic clients (Cooper et al., 2018; Kerns et al., 2016) but their effectiveness is yet to be determined (Spain & Happé, 2019).

A pilot study could be conducted to determine if a CBT program adapted to autistic clients, clinicians individually tailoring treatment, or another therapy modality entirely leads to the greatest improvement to clinical outcomes.

Future research could run test programs to determine which other therapies are more suitable: Cashin et al. (2012) suggest narrative therapy to develop clients' self-efficacy and problem-solving skills, and Cornwall et al. (2021) suggest radically open dialectical behavioural therapy to develop clients' capacity to cope with uncertainty.

Additionally, reports from autistic people with experience with specific therapeutic methods would be very valuable in the creation of a unique approach which remedies the limitations identified in existent modalities. Cooper et al. (2018) argue, however, that the therapeutic modality may be less important than the therapists' understanding of autism and its interactions with comorbid mental illnesses. Research could compare the efficacy of an autistic-specific therapeutic approach to autism-informed practitioners in improving patients' mental health outcomes.

Further, research could focus on adapting mental health interventions to low-resource environments (as suggested by Divan, 2017), which would develop autistic patients' confidence in the quality of mental health care regardless of their location.

In conclusion, there are many avenues of research waiting to be explored. From programs, professional education, therapeutic approaches, and diagnostic criteria, there is no shortage of possibilities for someone wanting to make a positive impact on autistic patients seeking treatment for mental illnesses.

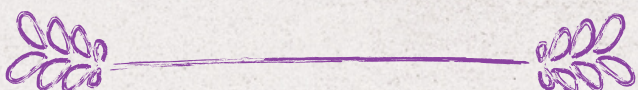
I look forward to seeing what developments occur soon in the world of autistic mental health!



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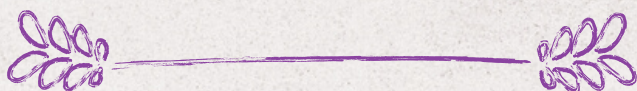
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Self-Efficacy: Believe and you Will Achieve!

Written by Ashleigh Lawrence

Edited by Grace Ma

Albert Bandura's Social Cognitive Theory (SCT) (previously Social Learning Theory) states that human motivations and behaviour do not arise entirely from within, rather, they are a product of reciprocal determinism (Bandura, 2008). The concept of reciprocal determinism holds that human behaviour is transactional, in other words, we influence and are influenced by a triad of our environment, cognition and behaviour (Bandura, 1978).



However, Bandura's theory also says that people have free choice. We are self-organising, self-regulating and self-reflecting. We have control over our behaviour, regardless of what influences us. Within SCT, Bandura proposed four processes of goal realisation; self-observation, self-evaluation, self-reaction and self-efficacy (Bandura, 2008).

Efficacy is defined as the ability to make things happen. Self-efficacy therefore, is to make things happen by yourself (Bandura, 1977). As a psychological phenomenon, it is one's belief in what they can or cannot do. It is a core personality characteristic reflecting one's perception of whether they can achieve a specific goal and overcome the necessary obstacles to do so (Bandura 1977, 1986, 1997). Bandura (1997) considered it to be a better predictor of behaviour than a person's ability.

A series of studies conducted by Bandura and colleagues found a positive relationship between self-efficacy and performance accomplishment (Bandura & Adams, 1977; Bandura et al., 1977; Bandura et al., 1980). They also found that self-efficacy plays an important role in committing to and achieving long-term goals (Bandura & Adams, 1977; Bandura et al., 1977; Bandura et al., 1980).

Table 1 reflects features that may appear in a person with strong self-efficacy versus weak self-efficacy.

Strong self-efficacy	Weak self-efficacy
<ul style="list-style-type: none"> • I can control my own motivation, <u>behaviour</u> and social environment • I will put in effort when faced with difficulties • I can achieve my goals if I take time to plan and strategize • I have or can create social support • I am not controlled by circumstance • I will learn from my failure and channel this into success 	<ul style="list-style-type: none"> • I cannot cope when faced with certain difficulties • I will avoid difficult tasks • I cannot do this because... (excuse) • I am worried and stressed • I will give up if setbacks occur • I will not try • No one is supporting me • I cannot control what is occurring to me

Table 1.

Success in university, health and sport

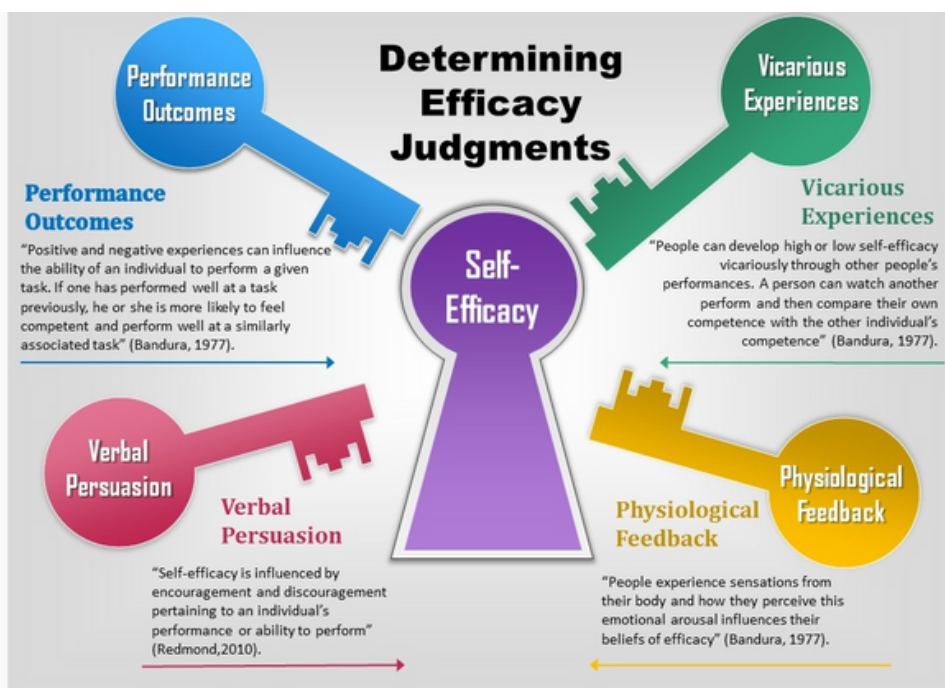
Self-efficacy is domain specific (Bandura, 1977). This means that levels of self-efficacy vary depending on whether we are studying, playing sports, eating food or exercising. For example, a person may have strong self-efficacy when studying for exams and will likely get good marks, but they may have weak self-efficacy when it comes to exercising and can't stick to a routine. Self-efficacy is a resource that can be developed or modified at any time in one's life.

A person's sense of self-efficacy comes from 4 main influences (Bandura, 1997):

- **Performance Outcomes (Mastery Experiences):** The experiences gained when taking on a new task and being successful, provides the individual with authentic evidence as to whether they have what it takes to master and succeed (failure will undermine this) (Bandura, 1977). People tend to put more time and energy into things they believe will lead to a positive outcome/result (Bandura, 1977).
- **Vicarious Experiences (Social Role Models):** Witnessing someone in a similar position achieve a shared goal increases one's belief that they too can succeed (Bandura, 1977).
- **Verbal Persuasion (Social Persuasion):** When doing a complex task and receiving positive feedback, one's ability to succeed is reassured. The earlier positive feedback is given, the stronger the self-efficacy (Bandura, 1977).
- **Physiological Feedback (Emotional States):** Attributing positive sensations with success and negative emotions with failure (Bandura, 1977).

Maddux & Meier (1995) built off Bandura's pillars and introduced a 5th influence:

- **Visualisation (Imaginal Experiences):** The act of visualising a goal being achieved or a desired behaviour enacted. This portrays goals as achievable – individuals are able to see themselves at the finish line. It makes success seem like a likely outcome and allows one to dissect their goal into smaller, more achievable parts.



Source: (Redmond, 2016)

Neurochemistry and Evolutionary Biology

Breuning (2012) discusses the role of neurochemicals in her book 'Meet your happy chemicals'. These neurochemicals may biologically explain self-efficacy theory.

Cortisol

A human's neurological makeup is reflective of evolutionary and adaptive survival mechanisms. Cortisol is released in response to acute stress and triggers an increase in blood flow and heart rate (Breuning, 2012). Cortisol plays a role in protecting us from threatening and dangerous situations, primed from humanity's earlier threats such as predator evasion. When cortisol is released, the brain creates a link between the perceived danger and stress response, regardless of the actual threat level (Breuning, 2012). These links are neural pathways that become stronger and more automatic when the stress response and perceived danger are linked again (Breuning, 2012). Stress responses to dangers such as predators are no longer relevant. However, in the modern context, our cortisol releases in work, school, and regular life experiences.

Happy Chemicals

On the other hand, our 'happy' brain chemicals; dopamine, oxytocin, endorphins, and serotonin, influence our mood, motivation, and attention from generally positive experiences (Breuning, 2012).



Dopamine: triggered when a goal is achieved, a reward is coming, one finds what they seek (Breuning, 2012).

Oxytocin: triggered by the feeling of safety, acceptance, love, trust, bonding as opposed to isolation and insecurity (Breuning, 2012).

Serotonin: triggered when receiving praise, respect, elevated status, or a stroked ego (Breuning, 2012).

Endorphin: triggered to enable one's limits and endurance to be tested. Also masks pain (Breuning, 2012).



Mirror Neurons

Mirror neurons activate through second-hand experience. When observing another completing a task, a reflection of the task is mimicked in the mind (Breuning, 2012). Interestingly, in studies of monkeys, this task visualisation of other monkey's actions, activated the same areas of the brain as if they were physically carrying out the task – potentially enabling neural pathways to be strengthened as though they were practicing (Breuning, 2012). While mirror neurons have only been identified in macaque monkeys, there is an ongoing investigation into a human equivalent (Cattaneo & Rizzolatti 2009). Results of a study from Schmidt et al., (2021) demonstrated that the brain areas; inferior frontal gyrus, inferior parietal cortex, fusiform gyrus, posterior superior temporal sulcus, and amygdala, were commonly activated in participants during social-cognition tasks, suggesting that humans may have a shared system for simulating or visualising, social experiences.

So how does this information link to Self-efficacy?

Stone (2018) created a table based off these neurochemicals that parallels with each of Bandura's four influences of self-efficacy.

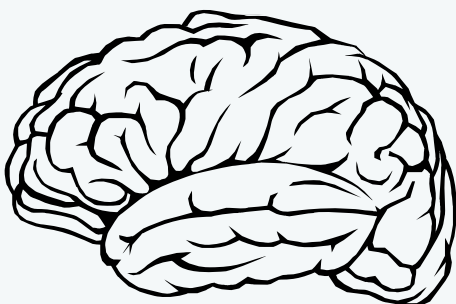


Parallelism Between Social-Psychological and Neurobiological Aspects of Self-Efficacy Theory

Social-psychology	Neuroscience
Enactive Attainment	Dopamine releases as goals are set and achieved and activities properly sequenced.
Vicarious Experience	Mirror neurons trigger as one observes a like model. Serotonin and dopamine release as one seeks to emulate and achieve the model's status.
Verbal Persuasion	Oxytocin releases when a trusted and admired facilitator or model offers feedback and praise. Serotonin releases as one's status and accomplishment are acknowledged.
Physiological State	Cortisol is avoided through careful sequencing of tasks, teaching of skills, and frontloading the experience.

Neurochemicals are released not only during lived experience but in anticipation of an event (Breuning, 2012). This parallels self-efficacy where explanations are rooted in beliefs of ability rather than actual ability.

However, studies show that cortisol is high during the anticipation of an event and may trigger a fight or flight response – deterring individuals from pursuing a task (Ewert et al. 2016). Subjective perception can stop people from carrying out straightforward tasks as their anticipation often does not reflect reality.



With all of this information, how can self-efficacy be developed?

To break it down, assessing and developing self-efficacy in a given domain can occur through the following steps:

1. **Choose** the domain to assess/develop. e.g., academic, exercise, eating, parenting.
2. **Measure** your self-efficacy for that domain using a specially designed scale for self-awareness. Scales have been developed for a wide variety of domains. I have linked a few at the bottom of this article.
3. **Utilise** the five pillars of influence as outlined above to practice, learn and acquire the tools for success. I have constructed a table with examples below.

Examples of how one can influence self-efficacy

Mastery Experiences	Vicarious Experiences	Verbal Persuasion	Physiological State	Visualisation
Break large tasks into small, achievable goals, preferably from easy to challenging. The success may drive you forward from dopamine release. Self-reflect each time before moving on.	Find someone you identify with, someone <u>similar to</u> you that has achieved something at the same level or related to your goal. If they can, you can. Your mirror neurons may fire here. Observation may also build trust and release oxytocin.	Seek feedback, to be self-aware, create an internal locus of control, be encouraged, and fix what isn't working. Positive feedback may release serotonin. Find those who encourage you. Ditch those who don't. Oxytocin is released from trust and low with those who do.	Accept that self-doubt is common. It is part of the growth process. These thoughts don't necessarily reflect your true capabilities. Build love and trust with supporters. This will produce oxytocin. Frame each activity in a healthy and realistic perspective Anxiety and depression should be addressed by mental health professionals.	Imagine yourself achieving/ having achieved the success you desire. Now visualise what obstacles may appear and how you could deal with them. Mirror Neurons!

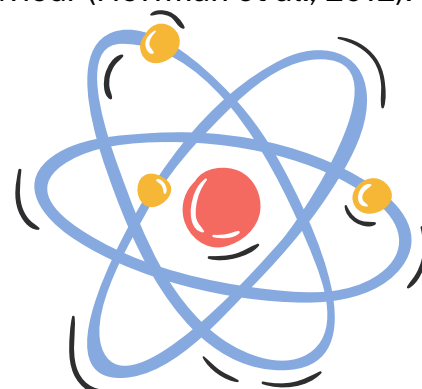
Other: Self-reflecting on success i.e., what strategies did you use to overcome setbacks? What could you use from this experience in the future?

Neural Pathways, Neural Plasticity: Consistency and practice = change!

It has been shown that strong self-efficacy can predict better-coping behaviour to adversity up to five years later, health functioning up to four years later, and maintain changes in habits over long periods of time (Bandura, 1997). Building self-efficacy in one domain can spill over to promote positive behaviours in other domains (Wells et al., 2004).

While self-efficacy can be built individually, it can also be addressed by counsellors, psychologists, and therapists, often through Cognitive Behavioural Therapy (CBT). CBT is used to treat psychological disorders such as anxiety, depression and chronic pain, based on the premise that cognition influences emotion and behaviour (Hoffman et al., 2012).

Furthermore, strong neural pathways that exist for one domain, can branch out in a process called 'grafting', developing additional neural pathways with less effort and time compared to developing self-efficacy in the first domain (Breuning, 2012).



As CBT is a tailored program where self-efficacy may be developed, it may foster changes such as the development of an internal locus of control, positive reappraisals and healthy habits (Friere, 2020).

Links to the Self-Efficacy Scales:

Exercise

https://www.sralab.org/sites/default/files/2017-06/Self-efficacy%20for%20exercise_Website_PDF.pdf

Academic

https://www.researchgate.net/publication/262924154_Academic_Self_Efficacy_Scale

Diet

https://www.midss.org/sites/default/files/diet_se_questionnaire.pdf

Parenting

<https://www.copmi.net.au/images/pdf/Research/Parenting-Scale-Feb2015.pdf>

General

https://pcna.net/wp-content/uploads/2018/12/16e_the_general_self_efficacy_scale.pdf

*Note: higher scores = stronger self-efficacy

If you have a plan to strengthen your self-efficacy, feel free to share with me:

Ashleightlawrence06@gmail.com **or**
Ashleigh.lawrence@students.mq.edu.au

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Stress Management Techniques for University Students

Written by Alyssa Krikorian

Edited by Grace Ma

It's almost the end of the uni semester, you are envisioning a summer holiday after you finish all your assignments and exams. Then it hits you... STRESS.

If you have experienced this, you are not alone. According to a national student survey conducted by Headspace and the National Union of students, it was reported that stress had impacted the study of 83.2% of Australian university and TAFE students within the last 12 months (Headspace, 2017). So, now that we are all in the same boat, how do we prevent a Titanic (stress) vs Iceberg (uni studies) situation from occurring? This article will discuss the everyday response of stress and how it can be mitigated through employing the stress management strategies of general relaxation techniques, ensuring that you have good Sleep Hygiene and high Self-Efficacy.

Stress is a normal part of our daily lives. We are constantly exposed to situations which induce this response, however, individual responses vary due to differing interpretations of an event. Stress can be defined as physical and emotional responses to an external situation which results in psychological, physical and behavioural deviations (Alborzkouh et al., 2015). Thus, because university students are constantly exposed to circumstances which strain or exceed their ability to cope, such as the pressure to achieve academic success and coping with difficulties and the prospect of an uncertain future, they experience stress (Bukhsh et al., 2011).

The importance of learning how to manage stress in university has implications to everyday life. Yes, although you won't be expected to complete a final exam in your future profession, learning how to recognise, anticipate and manage stress is an integral life skill. Regardless of the situation inducing stress, it can be utilised constructively through an understanding that it serves as a performance enhancer (Bukhsh et al., 2011). So, to avoid unmanaged stress, which results in negative emotional, physical and interpersonal complications, students can employ stress management strategies.

Stress management is the ability to administer a maintenance of control within a demanding situation or environment (Bukhsh et al., 2011). The practise of stress management behaviours has been shown to be critical in the promotion of health in university students, equipping them with information and skills to help them cope more effectively (Hailu, 2020).

General Relaxation Techniques

Progressive Muscle Relaxation (PMR)

An example of a stress management strategy that has showed to be effective is daily muscle relaxation through the technique of Progressive Muscle Relaxation (PMR). PMR involves alternately tensing and relaxing specific muscle groups in the body to reduce muscle tension that is accompanied by anxiety and stress (Kassymova et al., 2018). Within PMR an individual tenses the muscle groups of the legs, arms, abdomen, chest and face for 10 seconds, and releases muscle tension for 20 seconds (Kassymova et al., 2018). According to a study completed by Dolbier and Rush (2012), the intervention technique of PMR for a high-stress college sample had significant short-term effects for enhancing, and reducing, beneficial functioning, mitigating the negative effects of stress. Thus, PMR can be utilised in your study breaks, in order to reduce muscle tensions and decrease levels of stress.

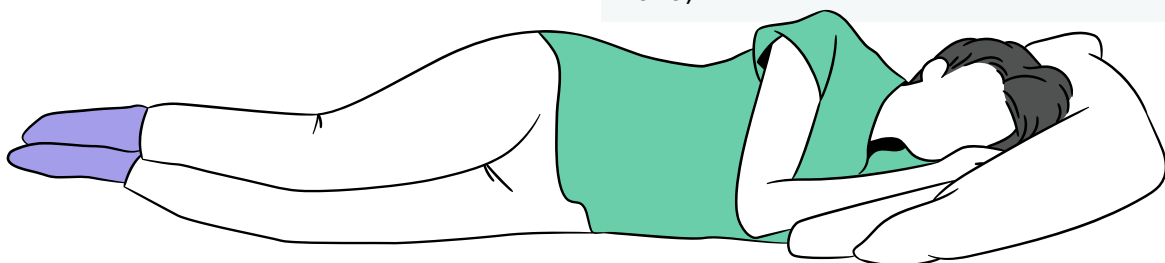
Diaphragmatic Breathing

Diaphragmatic Breathing is a deep breathing relaxation technique that can be utilised for university students managing stress. The principle of deep breathing is marked by the expansion of the abdomen as opposed to the chest (Kassymova et al., 2018). This technique functionally resets the automatic nervous system through the activation of a stretch-induced signal and hyperpolarisation current, synchronising the neural elements of the heart, lungs, limbic system and cortex (Kassymova et al., 2018).

According to a study by Ma et al. (2017), on a group of adults undergoing an intensive diaphragmatic breathing training for 20 sessions, found that the treatment group showed a significant decrease in negative affect, significantly increased sustained attention and significantly lower cortisol (the primary stress hormone) level after training compared to baseline. Therefore, diaphragmatic breathing can be utilised by university students, when completing an assessment task or studying for an exam, in order to improve concentration, increase positive affect and decrease levels of stress.

Maintaining Good Sleep Hygiene

Poor sleep within university students can be partially attributed to stress. Sleep plays an integral role in the maintenance of an individual's physical and mental health and cognitive processes (Anwer et al., 2019). Sleep mediates multiple domains of affective function including emotion, emotion memory, and emotion regulation (He et al., 2020). Sleep hygiene, behaviours relating to the promotion of good sleep, can be utilised to reduce stress. These behaviours consist of; keeping to a regular sleep-wake cycle, avoidance of daytime napping and sleep medication, heavy foods before sleeping, relaxation and the reduction of caffeine, nicotine and alcohol consumption (Suen et al., 2010). According to a study completed on the sleep hygiene of university students in Hong Kong, the findings indicated that over half of the participants could be classified as poor sleepers with suboptimal levels of sleep quality (Suen et al., 2010).



Compulsive social media usage and its relationship to sleep hygiene within university students must also be considered as an attribution to stress. According to a study by Tandon et al. (2020), the association between compulsive social media usage and sleep hygiene was significant for university students. The restriction of mobile phone usage, 30 minutes before sleep for four weeks, for university students has shown to decrease sleep latency by 12 minutes and increase the duration of sleep by 18 minutes (He et al., 2020). These findings are consistent with the results of Bartel et al. (2018), finding that adolescents who restricted phone usage 80 minutes before sleep, for a one week period, increased sleep duration by 21 minutes.

It was also found that pre-sleep arousal significantly decreased, suggesting that this could also be attributed to restricting mobile phone usage at night before sleep, however the specific effect of restricting night time mobile phone usage on pre-sleep arousal needs to be explored further (He et al., 2020). Ultimately, these studies show that restricting mobile phone usage before bed could effectively improve sleep, as it could reduce the impact of light emitted and reduce arousal induced by contents on mobile phones, such as social media.

Increasing Levels of Self-Efficacy

Self-efficacy is a well-established theory posited by Bandura (1977), relating to an individual's personal belief in their capacity to execute behaviours to produce specific performance outcomes (Carey & Forsyth, 2009).

Self-efficacy is the belief individuals hold about their own ability to complete tasks (Zhao et al., 2021), which has an impact on levels of stress. High self-efficacy was found to decrease educational stress, with personal beliefs being a major indicator of academic performance and educational stress coping for students (Arslan, 2017). This is because self-efficacy decreases levels of stress and increases endurance to negativity (Arslan, 2017). The term Academic Vitality, an adaptive response to challenges and issues experienced during education, can be used to demonstrate this relationship between high self-efficacy and decreased levels of stress experienced by university students (Alborzkouh et al., 2015).

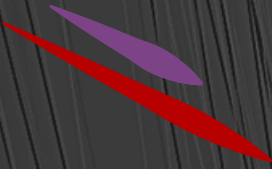
Thus, to manage stress in university a wide range of techniques can be employed including the somatic general relaxation techniques of PMR and Diaphragmatic Breathing, considerations of sleep hygiene and levels of self-efficacy towards completing university tasks and coping with stress. Ultimately, employing the strategies discussed may decrease stress and make the expectations of university studies more approachable and less intimidating.



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