

# Veterinary Wellness Bien-être vétérinaire

## Nature, nurture, and mental health. Part 2: The influence of life experience

Debbie L. Stoewen

The first article in this series (1) covered the nature-related factors that can influence mental health. This article will focus on the nurture-related factors. It is the interplay of the environmental conditions to which we are exposed along with our genetic, psychological, and biological constitution that gives rise to the unique attributes that make each human being different from another. These attributes influence the extent to which we may be challenged by mental health problems or develop a mental illness.

Whether we thrive (or not) in life depends on the environments in which we are conceived, born, grow, learn, build a career and family, and age (2). The conditions and contexts of our lives — both social and physical — can either protect mental health or put it at risk. They can enable us to reach our highest potential or challenge us in ways that can leave us with troubles that can take a lifetime to heal. They shape our appreciation of life and what it may offer, including our values, morals, and worldviews.

Our life experiences, however, are not definitive in their influence. People naturally respond to the same circumstances in different ways. What may be an experience of significance for one person may not be for another, related, at least in part, to the unique aspects of their genetic, psychological, and biological constitution, reflecting again the intersectionality of nature and nurture. Likewise, we each have a unique life story, woven with its own players, plots and subplots. Such novelty makes any response possible.

The designs of our lives are unique and infinitely complex. Each person has a one-of-a-kind life story with parts both enabling and challenging. Our childhood experiences, so formative; the ordinary and extraordinary experiences of our lives; and the universally influential realities of social media, climate change, and the pandemic all can influence mental health. Each will be discussed in turn.

### Adverse childhood experiences

Our experiences in childhood, particularly the traumatic ones, can have great influence on our lives. Traumatic experiences that occur before the age of 18 are called adverse childhood experi-

---

Dr. Stoewen is an academic, entrepreneur, and facilitator committed to advancing the health and well-being of people and animals through speaking, writing, and education.

Use of this article is limited to a single copy for personal study. Anyone interested in obtaining reprints should contact the CVMA office ([hbroughton@cvma-acmv.org](mailto:hbroughton@cvma-acmv.org)) for additional copies or permission to use this material elsewhere.

ences (ACEs) (3). ACEs fall into 3 domains (and 10 categories): *abuse* (physical, emotional, and sexual); *neglect* (emotional and physical); and *household dysfunction* (divorce, mental illness, substance abuse, violence, and incarceration among caregivers) (3,4). Although there is no national survey data on ACEs in Canada, the Centers for Disease Control and Prevention (CDC) report 61% of adults have at least one ACE and 16% have 4 or more types (categories) of ACEs (5). Women have higher overall ACE scores than men (5).

People who have experienced abuse, neglect, and household dysfunction during their childhood are at much greater risk of mental illness throughout life (4). There is a dose effect: the more categories of exposure a person experiences, the more likely he or she is to experience poor mental health (4,6), and alongside this, poor physical health, increased at-risk behaviors, and early death (7). These outcomes are thought to be associated with the effects of “toxic stress” on healthy brain development, affecting the development of socio-cognitive skills, which in turn, leads to poor choices in health habits and life decisions (3). Those with ACEs have an increased risk for, and incidence of, anxiety disorders, depression, substance abuse, and suicidality (8,9).

### The ordinary to extraordinary experiences

The ordinary to extraordinary experiences of our lives that cause stress can impact us as well. It has long been recognized that stress plays a significant role in the development of mental disorders (10). A stressor can be thought of as a life event, or series of events, that disrupts psychological equilibrium, and in this, may catalyze a mental disorder (11).

Stressors can take the form of *discrete events*, such as relationship breakups, car accidents, complications during pregnancy, a death in the family, or the loss of a job. Stressors can also be more *chronic circumstances*, such as long-term illness, ongoing marital problems, perpetual workplace troubles, unending financial difficulties, or wider difficulties such as political strife and war (12). Stressors can also be the *daily hassles*, like keeping up with chores or meeting deadlines. Stressors — as discrete events, chronic circumstances, and daily hassles — can take their toll, causing stress that can culminate in a mental disorder.

### Social media

Although social media can offer many benefits, with the ability to connect with anyone anywhere and with many people at the same time, building relationships and sharing information, it can also adversely affect mental health. It can incite “fear of missing out” (FOMO) and unhealthy social comparison (13).

Many studies have found a strong link between heavy social media use and an increased risk for anxiety, depression, eating disorders, loneliness, self-harm, and even suicide ideation (13).

Cyberbullying is a real concern in the veterinary profession. A recent study by the American Veterinary Medical Association (AVMA) reported that 1 in 5 veterinarians has been a victim, or works with someone who has been a victim, of cyberbullying in the workplace (14). Incidents of bullying can range from the posting of negative reviews to threats of financial, physical, and/or emotional harm to veterinarians, their staff, and families. The stress of cyberbullying not only adds tension in the workplace, as a dark, hovering cloud, but can lead to depression and suicide.

## Climate change

Climate change is one of the great challenges of our time. Since 2000, the frequency of climate change-related weather disasters has soared by 46% (15). Rising temperatures, heat waves, floods, tornadoes, hurricanes, droughts, fires, loss of forest, and melting glaciers, along with the disappearance of rivers and desertification, can impact mental as well as physical health (16). Climate change can cause stress and distress, provoke high-risk coping behaviors (such as increased alcohol use), and lead to anxiety, depression, post-traumatic stress, and suicidal thoughts (16–18). Climate change can also affect mental health through the loss of jobs, social and community resources, and through forcing people to move (18). Among other populations that are especially vulnerable, those with pre-existing mental health disorders are disproportionately affected by the consequences of climate change (17,18).

Importantly, climate change can be experienced not only as a *direct* threat, but as a global or existential threat to civilization and ways of life (19,20). Awareness of the looming threats and impacts of climate change on the current and future well-being of the earth and its inhabitants can negatively affect emotional and social well-being (20). Climate change can contribute to several recently coined *psychoterratic syndromes: ecoanxiety, ecoparalysis, solastalgia, and biospheric concern* (16,19).

*Ecoanxiety* refers to the anxiety people face from constantly being surrounded by the ‘wicked’ and threatening problems associated with a changing climate. *Ecoparalysis* refers to the complex feelings of not being able to take effective action to significantly mitigate climate change risks. *Solastalgia* refers to the distress and isolation caused by the gradual removal of solace from the present state of one’s home environment (1). Lastly, *biospheric concern* refers to a type of stress that people feel when they see plants, animals and ecosystems that are vulnerable (16).

## COVID-19 pandemic

The pandemic has profoundly affected people around the globe, causing high levels of stress, distress, fear, anxiety, and insomnia; especially with the uncertainties accompanying a new disease (21,22). Social distancing and widespread lockdowns; which constrained people’s ability to access support from loved ones, learn, work, and engage in their communities; added to the stress. These measures also led to feelings of isolation, loneliness, and for some, despair. On top of all of this has been the

suffering with COVID-related illness and deaths. To date, over 37 000 Canadians (and 6 million worldwide) have died due to COVID-19 (23).

According to a recent report by the World Health Organization (WHO), there has been a 25% increase in the prevalence of anxiety and depression worldwide (24). Women have been more impacted (than men), as well as those with pre-existing health conditions (such as asthma, cancer, and heart disease). Young people have especially been affected, with a rise in the risk of self-harming and suicidal behaviors. Across the globe, people are looking for hope and signs of brighter days ahead as they navigate the challenges in a now much more complicated world.

Although many faced job loss, others faced greater demands, including those in the veterinary profession. Veterinary clinics around the world needed to implement new policies and procedures in response to the pandemic, including shifting to curbside care, practicing social distancing, intensifying sanitation measures, wearing personal protective equipment, and adopting new technologies such as virtual check-ins, telemedicine, and contactless payment. Many clinics initially dealt with restrictions on elective services, and, at times, had to limit the range and volume of services due to staff shortages or supply chain issues. Although the new ways of working reduced efficiency (decreasing the number of appointments that could be handled in a day), the demand for care rose, with reports of higher client numbers (with new adoptions) and earlier detection of health problems (with working from home), along with the need to attend to a backlog of postponed care. According to the 2020 CVMA Workforce Study, the veterinary profession appears to be working at, or above, capacity, with a shortage of veterinarians and technicians identified as one of the key challenges faced by the profession (25). The stress of substantial workplace modifications, heavy demands, shortage of staff, and serving a stressed, anxious, and demanding clientele, can predispose to burnout and/or culminate in a mental disorder.

## Taking it from here

So, who are you in your world? What is it about you, *meaning your genetic, psychological, and biological constitution*, and your world, *meaning your collective life experience*, that may be influencing your mental health? Your understanding of this is the pivotal first step to better mental health. Awareness, however, is not enough; it needs to be allied with acceptance. In any given moment, we can lean in and accept or deny and avoid. Acceptance requires open, full acknowledgment of *what is*, with courage and authenticity. When we see with *what is* clarity, we will be able to see what we can do about it.

As mental health is determined by the combination of, and interaction between, personal and environmental factors, you may presume that there are some things that we can’t do anything about — like the hereditary predispositions that we are born with and the life experiences that have shaped us. These simply *are*, right? After all, you can’t trade in your brain for a different model! You can’t rewrite history! So, what *can* you do? The answer is simple.

“It’s not just what you were born with or what you’ve experienced that determines your mental health. It’s what you do

with these. It's *how you live your life*. And *how you live your life* is a matter of choice."

## The choices we make

You may think it's the big decisions you've made over the course of your life that have shaped you into who you are today — what schools you went to, what vocation you chose, whether or who you married, whether you raised a family, how you grew your career, and the shifts you made to go in whole new directions. But in truth, it's just the opposite. It's all the thousands — if not tens of thousands — of microdecisions we make every day, which we are often unaware of, that most shape the course of our lives (26). These are the seemingly inconsequential decisions made all the time that, in fact, are of profound influence. Indeed, it's the millions of microdecisions that pave the way for the macrodecisions.

The decisions you make add up to define *how you live your life*. To optimize your mental health begins with accepting that *decisions matter*, even — and especially — the decisions that you make every moment of every day. *How do you live your life?* Do you *maximize* your health potential? What *can* you do to maximize it? The next and final article in this series will offer a range of strategies to do just that; especially those to counter the nature and nurture aspects that increase the risk of mental illness. Through awareness, acceptance, and then action — taking the right steps — we can each optimize our mental health.

## References

1. Stoewen D. Nature, nurture, and mental health. Part 1: The influence of genetics, psychology, and biology. *Can Vet J* 2022;63:427–430.
2. Mental Health Foundation. Do my life experiences affect my mental health? Available from: <https://www.mentalhealth.org.uk/our-work/prevention/do-my-life-experiences-affect-my-mental-health> Last accessed March 2, 2022.
3. Harvard University: Center on the Developing Child. ACEs and Toxic Stress: Frequently Asked Questions. Available from: <https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/> Last accessed March 19, 2022.
4. Medicalxpress. Bangor University. Adverse childhood experiences increase risk of mental illness, but community support can offer protection. Available from: <https://medicalxpress.com/news/2018-01-adverse-childhood-mental-illness.html> Last accessed March 19, 2022.
5. CDC, Vital Signs Adverse Childhood Experiences (ACEs): Preventing early trauma to improve adult health. Available from: <https://www.cdc.gov/vitalsigns/aces/pdf/vs-1105-aces-H.pdf> Last accessed March 19, 2022.
6. Gilbert LK, Breiding MJ, Merrick MT, et al. Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *Am J Prev Med* 2015;48:345–349.
7. Strand EB, Brandt J, Rogers K, et al. Adverse childhood experiences among veterinary medical students: A multi-site study. *J Vet Med Edu* 2017;44:260–267.
8. De Venter M, Demyttenaere K, Bruffaerts R. The relationship between adverse childhood experiences and mental health in adulthood. A systematic literature review. *Tijdschrift Voor Psychiatrie* 2012;55:259–268.
9. Sciolla AF, Wilkes MS, Griffin EJ. Adverse Childhood Experiences in Medical Students: Implications for Wellness. *Academic Psychiatry* 2019;43:369–374. Available from: [https://www.researchgate.net/publication/331627437\\_Adverse\\_Childhood\\_Experiences\\_in\\_Medical\\_Students\\_Implications\\_for\\_Wellness](https://www.researchgate.net/publication/331627437_Adverse_Childhood_Experiences_in_Medical_Students_Implications_for_Wellness) Last accessed March 19, 2022.
10. Monroe SM, Simons AD. Diathesis-stress theories in the context of life stress research: Implications for the depressive disorders. *Psychological Bulletin* 1991;110:406–425. Available from: [https://www.researchgate.net/publication/21396707\\_Diathesisstress\\_theories\\_in\\_the\\_context\\_of\\_life\\_stress\\_research\\_Implications\\_for\\_the\\_depressive\\_disorders](https://www.researchgate.net/publication/21396707_Diathesisstress_theories_in_the_context_of_life_stress_research_Implications_for_the_depressive_disorders) Last accessed March 19, 2022.
11. Oatley K, Keltner D, Jenkins JM. Emotions and mental health in childhood. In: *Understanding Emotions*. 2nd ed. Oxford, UK: Blackwell Publishing, 2006b:321–351.
12. Oatley K, Keltner D, Jenkins JM. Emotions and mental health in adulthood. In: *Understanding Emotions*. 2nd ed. Oxford, UK: Blackwell Publishing, 2006a:353–383.
13. Robinson L, Smith M. Social Media and Mental Health. Available from: <https://www.helpguide.org/articles/mental-health/social-media-and-mental-health.htm> Last accessed March 19, 2022.
14. AVMA Cyberbullying in veterinary medicine. Available from: [avma.org/News/JAVMANews/Pages/150915o.aspx](https://www.avma.org/News/JAVMANews/Pages/150915o.aspx) Last accessed March 19, 2022.
15. Watts N, Amann M, Ayeb-Karlsson S, et al. The Lancet countdown on health and climate change: From 25 years of inaction to a global transformation for public health. *Lancet* 2018;391:581–630.
16. Cianconi P, Betrò S, Janiri L. The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. *Front Psychiatry* 11:74. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7068211/> Last accessed March 19, 2022.
17. Dodgen D, Donato D, Kelly N, et al. 2016: Ch. 8: Mental Health and Well-Being. *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. U.S. Global Change Research Program, Washington, DC, 217–246. <http://dx.doi.org/10.7930/J0TX3C9H> Available from: <https://health2016.globalchange.gov/mental-health-and-well-being> Last accessed March 19, 2022.
18. APA, Climate Change and Mental Health Connections. Available from: <https://www.psychiatry.org/patients-families/climate-change-and-mental-health-connections#:~:text=The%20mental%20health%20consequences%20of,anxiety%20and%20post%2Dtraumatic%20stress> Last accessed March 19, 2022.
19. Hayes K, Blashki G, Wiseman J, et al. Climate change and mental health: Risks, impacts and priority actions. *Int J Ment Health Syst* 2018;12:28. Available from: <https://ijmhs.biomedcentral.com/track/pdf/10.1186/s13033-018-0210-6> Last accessed March 19, 2022.
20. Fritze JG, Blashki GA, Burke S, Wiseman J. Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *Int J Ment Health Syst* 2008;2:13.
21. CDC. Coronavirus Disease 2019 (COVID-19): Coping with Stress. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html> Last accessed March 19, 2022.
22. Wu T, Jia X, Shi H, et al. Prevalence of mental health problems during the COVID-19 pandemic: A systematic review and meta-analysis. *J Affect Disord* 2021;281:91–98.
23. Government of Canada. COVID-19: Outbreak update. Available from: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html> Last accessed March 19, 2022.
24. WHO. COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide. Available from: <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide> Last accessed March 19, 2022.
25. 2020 CVMA Workforce Study. Available from: <https://www.canadianveterinarians.net/media/ak3lonad/2020-cvma-workforce-study-final-report.pdf> Last accessed April 13, 2022.
26. Faerman J. The power of microdecisions: The hidden factors that control your happiness, success and flow. Available from: <https://www.flowconsciousnessinstitute.com/the-power-of-micro-decisions/> Last accessed March 19, 2022.