Eating Disorders and Neurodivergence: A Stepped Care Approach
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By Laurence Cobbaert and Anna Rose (nee: Millichamp) on behalf of Eating Disorders Neurodiversity Australia (EDNA)

Work commissioned by the National Eating Disorders Collaboration (NEDC)

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**Authors:** Laurence Cobbaert and Anna Rose

**Contributor:** Annie Crowe

**Reviewers:** Dr Elysa Roberts (The University of Newcastle), Dr Deborah Mitchison (Western Sydney University), and Dr Randall Long (Flinders University)

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**Keywords:** eating disorders, feeding, neurodiversity, neurodivergence, autism, ADHD, anorexia nervosa, bulimia nervosa, ARFID, binge eating disorder, fat activism, social justice, epistemic injustice, iatrogenic harm, psychoneuroimmunology, metabolism, mental health, Tourette’s syndrome, disability, inclusivity
About the authors

Laurence Cobbaert (she/they)

Laurence is the Chair and Research Lead of Eating Disorders Neurodiversity Australia (EDNA). They are queer and neurodivergent and have lived experience of a restrictive eating disorder. Laurence is a neurodiversity and mental health advocate who is passionate about promoting neurodiversity-affirming, gender-affirming, and inclusive eating disorder care.

Laurence holds a Certificate II in Medical Service First Response (South Australia Ambulance Service), a Diploma in Business Management and Spanish (Open University, UK), a Bachelor of Science in Aviation (Lewis University, USA), a Bachelor of Psychological Science (University of Adelaide), and a Master of Philosophy in Gender Studies (University of Adelaide). She is currently completing a PhD (University of New South Wales) looking at neurodivergence in relation to eating disorders. Laurence’s research interests include psychoneuroimmunology (PNI), psychoneuroendocrinology (PNE), sensory processing, eating disorders, gender, neurodiversity, and mental health. Laurence is a graduate of the Autism CRC Sylvia Rodger’s Academy and the Founder and Chair of Australia and New Zealand Academy for Eating Disorders’ (ANZAED) neurodiversity special interest group.

In her spare time, Laurence enjoys expressing her creativity and rainforest mind through writing poetry and inventing new random things (mixing MacGyver and Inspector Gadget style). She also loves adventures such as roller-skating, hiking, traveling, and going on solo road trips. Laurence has many interests; they love to learn about aviation, archaeology and mythology, ancient languages (hieroglyphs, ancient Greek, Latin, Sanskrit), and palaeontology (especially dinosaurs).

Anna Rose (they/them)

Anna is an Accredited Practising Dietitian (APD), a Credentialled Eating Disorder Clinician, and the Deputy Chair and Clinical Lead of Eating Disorders Neurodiversity Australia (EDNA). Anna is also a proud neurodivergent (Autistic-ADHD), queer, non-binary dietitian, with lived experience of a restrictive eating disorder.

With undergraduate degrees in Business (Finance) and Nutrition and Dietetics (Hons), they have more than 12 years of experience as a dietitian. Anna has focussed their clinical work in paediatric nutrition, specialising in supporting children and adolescents who are experiencing feeding and eating challenges and disorders, and their kin and carers.

Anna has recently turned their focus to research and is currently undertaking a PhD at Bond University. Drawing largely on qualitative research methodologies, Anna is seeking to illuminate how neurodivergent individuals make sense of their childhood and adolescent feeding and eating experiences with a view to informing neurodiversity-affirming feeding and nutrition practices.
Anna’s research interests cover the breadth of feeding and eating disorders, with a special focus on feeding and eating disorders in the neurodivergent and LGBQTIA+ communities, as well as contributing to dignity-based evidence and practice in nutrition. Anna also enjoys teaching in their role as a Sessional Teaching Fellow for Bond University’s Master of Nutrition & Dietetic Practice Program.

In their spare time, Anna enjoys skateboarding, roller-skating, dancing wildly, singing badly, and being silly with their two small humans.
Content warning

This report contains information that may be distressing for some readers. Topics discussed in this report include, but are not limited to, emotional and psychological distress (including trauma and suicidality), mental ill-health, discrimination, minority stress, systemic oppression (e.g., sexism, ableism, anti-fatness, homophobia, transphobia, racism), institutional abuse (e.g., medical gaslighting and iatrogenic harm), tone policing, sexual violence, and use of restraint in inpatient settings.

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Free support services are available:

Beyond Blue
Telephone (1300 224 636) 24 hours/7 days or chat online 3 pm to 12 am AEST/7 days.
For more information: www.beyondblue.org.au/get-support/get-immediate-support

Lifeline
Lifeline offers crisis support by telephone 24 hours/7 days (13 11 14) or chat online 7 pm to 12 am AEST/7 days.
For more information: https://www.lifeline.org.au/gethelp/get-help-home

Butterfly Foundation
Call (1800 33 4673), email the Helpline, or use the webchat between 8 am and 12 am AEST/7 days.
For more information: https://butterfly.org.au/get-support/helpline/

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For more information: https://www.1800respect.org.au/

Kids Helpine
Kids Helpine is a free and confidential 24/7 online and phone counselling service for young people aged 5 to 25 (1800 55 1800).
For more information: https://kidshelpline.com.au/

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For more information: https://www.amaze.org.au/autismconnect/

In case of an emergency, call 000.
Terminology

The language we use to refer to and describe individuals and groups of people carries tremendous ideological power that shapes broader understandings, perceptions, and attitudes. This is especially true for members of marginalised communities, who are often stereotyped and stigmatised through the use of pejorative, dehumanising, and deficit-based terminology. Thus, it is important to respect the language choices of communities and individuals (Natri et al., 2023).

While the term neurodivergence may be conceptualised in a variety of ways (see Ne'eman & Pellicano, 2022; Gillespie-Lynch et al., 2020; Shaw et al., 2021; Moore, McIntyre, & Lanivich, 2021; den Houting, 2019; Koi, 2021; Pellicano & den Houting, 2022; Dyck & Russell, 2020; Stenning & Rosqvist, 2021), we hereby refer to neurodiversity as an innate form of neurocognitive functioning that is significantly different from societal understandings of ‘typical’. We, the authors, choose to avoid the word ‘normal’ in this context given its alienating and stigmatising connotations (Huang, Trolley, Foley, & Arnold, 2023; NJACE, 2022). For the purposes of this document, the terms neurodiversity and neurodivergent encompass autism, attention deficit/hyperactivity disorder (ADHD), dyslexia, dyspraxia, dyscalculia, dysgraphia, apraxia, misophonia, intellectual/learning disability, giftedness, synaesthesia, and Tourette’s syndrome (TS) (Giwa Onaiwu, 2020; Clouder et al., 2020).

Neurodivergent people are members of a neurominority (Doyle & McDowall, 2022). People who are not neurodivergent form the neuromajority and are identified as neurotypical. Non-autistic people are sometimes referred to as allistic. However, allistic people may or may not be neurodivergent, as neurodiversity is an umbrella term that includes a wide range of neurocognitive profiles (as described above). Additionally, neurotype refers to someone’s neurocognitive profile; this can mean neurotypicality, autism, ADHD, dyslexia, or intersectional types of neurodiversity such as combined autism and ADHD (informally abbreviated as AuDHD by members of the neurodivergent community).

The majority of the English speaking autistic community prefers the use of identity-first language (i.e., autistic person) as opposed to person-first language (i.e., person with autism) (Brown, 2011; Autistic Not Weird Survey, 2022; Amaze, 2018; Radulski, B., n.d.). This preference has been documented in several academic publications (Monk, Whitehouse, & Waddington, 2022; Bottema-Beutel et al., 2021; Kenny et al., 2016; Taboas, Deepeke, & Zimmerman, 2022; Keating et al., 2022). The rationale for this linguistic preference stems from a willingness to reclaim and reframe autism as an identity to be embraced rather than a disorder to be ashamed of and cured (Bury, Jellett, Spoor, & Hedley, 2020; Botha & Gillespie-Lynch, 2022). Many autistic people argue that person-first language implies that autism is an inherently negative component detached from the individual. This, in turn, serves to fuel the broader assumption about there being a ‘normal’ person trapped ‘behind the autism’ and that, with treatment, the autism will go away to ‘free’ the hypothetical ‘normal’ person it was hindering (Walker, n.d.). Far from this mischaracterisation of autism, autistic people perceive autism as being at the core of their sense of self and identity (Botha, Dibb, & Frost, 2022b; Gray-Hammond, 2020; Davies, 2022) rather than something they have that needs fixing. In essence, autistic people are not ‘deficient’ neurotypicals, in the same way gay people are not ‘failed’ heterosexuals. Although identity-first language is the preference of a majority of the autistic community, it is always ideal to enquire with individuals as to what their preferences are, as some may still prefer person-first language.

There is also a move away from person-first language (i.e., person with ADHD) by some members of the ADHD community. While there is limited academic work exploring this evolving linguistic preference (Stewart, 2017), community resources are emerging showing that members of the ADHD community tend to prefer referring to themselves as ‘being ADHD’ or being an ‘ADHDer’ rather than ‘having ADHD’ (Amherst Psychology, 2021). Although in its infancy, there is also a growing movement focusing on the overhaul and reconceptualising of ADHD as a diagnostic
construct, including changing its name (van Hulst, Wekhoven, & Durston, 2021; Hallowell & Ratey, 2022; Cheyette & Cheyette, 2022; Hammer, 2022; Graye, 2018).

Beyond autism, ADHD, and giftedness (Reis & Renzulli, 2003), there remains a lack of research and community consensus on the terminology preferences in relation to other types of neurodivergence such as dyspraxia, intellectual disability, TS, and dyslexia. Therefore, this report uses identity-first language in reference to autism, ADHD, and giftedness, in acknowledgement of community preferences, but person-first language in reference to other forms of neurodivergence, in accordance with published guidelines (People With Disability Australia, 2019).

The terms neurodiverse and neurodiversity are frequently used inappropriately. Neurodiverse is a word that describes a group of people composed of both neurotypical and neurodivergent individuals. For example, the human population is neurodiverse. On the other hand, an individual may identify as either neurotypical or neurodivergent. Neurodiversity is a term that describes the undeniable variety of neurocognitive profiles that exists naturally in the human population.

The neurodiversity paradigm offers a perspective on neurodiversity that draws on three foundational principles: (1) neurodiversity is a natural occurrence and an important contributor to human diversity; (2) fundamental opposition to the idea that there is a clearly definable ‘normal’ form of neurocognitive profile that is superior across all contexts; and, (3) social dynamics and power imbalances are present and relevant in relation to neurodiversity, just as they are for other forms of human diversity (e.g., gender, sexuality, race) (Walker, 2014).

The neurodiversity movement is grounded in the neurodiversity paradigm and describes a social justice and civil rights movement mainly driven by self-advocates (Walker, 2014). A neurodiversity-affirming approach, or framework, therefore respects, celebrates, and values all neurocognitive profiles equally, and works to address inequities underlying minority stress (Botha & Frost, 2020). More information regarding the use of neurodiversity-affirming language can be found on Nick Walker’s website, where she outlines definitions and provides guidance on appropriate usage (Walker, 2023).
**Glossary**

An extensive glossary is hereby included to both acknowledge that some of the terminology may be new to readers and to clarify the authors’ specific interpretation of certain phenomena or language conventions.

**Alexithymia:** Alexithymia refers to difficulties associated with appraising and expressing one’s own emotions as well as differentiating them from sensory-based elements. People who experience alexithymia, for example, can have trouble knowing whether they are irritated or thirsty, overwhelmed by loud sounds or angry, sad or hungry (Sam, 2019).

Alexithymia is connected to sensory processing and has been linked to emotional responsiveness (Luminet, Nielson, & Ridout, 2021), self-harm (Norman & Borrill, 2015; Iskric et al., 2020), perfectionism (Marzaro, Ruggiero, Scarone, Bertelli, & Sassaroli, 2011; Pink et al., 2021), substance dependency (Bashapoor, Hosseini-Kiasari, Daneshvar, & Kazemi-Taskooh, 2015), compulsivity (Goerlich-Dobre et al., 2014), loss of control eating (Shank et al., 2019), and eating disorders (Westwood et al., 2017).

**Anti-fat bias:** Anti-fat bias is any discriminatory belief and/or behaviour which targets people because of their perceived or actual fatness. Anti-fat bias is part of a broader ideological system of oppression called anti-fatness or fatphobia (Kinavey & Cool, 2019; Gordon, 2021). Anti-fat bias is also sometimes referred to as weight stigma.

**Ant-fatness:** Anti-fatness refers to prejudicial stereotypes and beliefs against fat people (Stoll & Egner, 2021; Butterfly Foundation, 2021). Anti-fatness can manifest in a variety of ways, such as interpersonal (e.g., bullying) and institutional (e.g., employment, healthcare, education) discrimination and exclusion. Anti-fatness negatively affects fat people, including decreased access to employment opportunities, lower income, and early preventable death due to medical gaslighting (Gordon, 2021).

**Aphantasia:** Aphantasia refers to the struggles one may experience in relation to forming mental imagery and visualisations (Pounder, 2021).

**Apraxia:** Apraxia refers to difficulties with movement and coordination. For example, apraxia can impact on someone’s ability to speak (apraxia of speech), walk, sit straight, and/or swallow (BetterHealth Channel, 2022).

**Bias:** Biases refer to either explicit or implicit aversions and prejudicial attitudes, mostly irrational, to certain types of people or traits they may have.

**Body image:** Body image refers to one’s perception and feelings regarding their body’s shape, size, and/or features. Negative body image is a risk factor for developing eating disorders (Shagar, Harris, Boddy, & Donovan, 2017). Mediators involved in negative body image include media representations, diet culture, and body shaming. Neurodivergent people (Van Eck, Morse, & Flory, 2018; Healy, Pacanowsk, Kennedy, & Obrusnikova, 2021; Asada et al., 2018) and members of the LGBTQIA+ community (Tabaac, Perrin, & Benotsch, 2018) are shown to experience high rates of psychological distress associated with negative body image.

**Body mistrust:** Body mistrust refers to one’s lack of trust in their own body signals (inwards). Unlike body image, which is based on how one feels about their body based on psychosocial factors (outwards), body mistrust is connected to interoceptive awareness (Brown et al., 2020).

**Burnout:** Research and community resources have highlighted that burnout has different underpinnings and presentations in neurodivergent individuals (Mantzalas et al., 2022; Finch, 2021; Enright, 2021) compared with neurotypical people. Neurodivergent burnout often results from factors associated with systemic oppression and minority stress (e.g., lack of accommodation and
appropriate support, marginalisation, discrimination, interpersonal violence, masking) (Arnold et al., 2023; Gibbs & Pellicano, 2023; Raymaker et al., 2020).

Co-production: Co-production, or participatory research, refers to research practices that involve researchers and community members working together as equal partners (Lambert & Carr, 2018; Faulkner et al., 2021; Lignou, Capitao, Hamer-Hunt, & Singh, 2019; Pinfold et al., 2015; Bradley, 2015). Traditionally, neurodivergent people have been conceptualised as mere subjects in research, therapy design, and knowledge production that primarily concerned them (Murray, Milton, Green, & Bervoets, 2022; Botha & Cage, 2022; Pearson et al., 2022; Gillespie-Lynch et al., 2017; den Houting et al., 2022; McDonald & Raymaker, 2013; Gourdon-Kanhukamwe et al., 2022). This form of exclusion, objectification, and denial of epistemic agency is referred to as epistemic injustice (Chapman & Carel, 2022; Crichton, Carel, & Kidd, 2017; Lakeman, 2010; Newbigging & Ridley, 2018; Bueter, 2019; Armstrong, 2017; Milton & Bracher, 2013). Co-production allows community members to become active agents in the research conducted about them, rather than passive objects of scrutiny (Stark et al., 2021; Groot, Haveman, & Abma, 2022; Meehan & Glover, 2007; Ocloo & Matthews, 2016; Farrington, 2016; Welch, Cameron, Fitch, & Polatajkko, 2022; Rose & Rose, 2023). Co-production therefore demands a greater emphasis on ethically balancing discriminatory power dynamics in academia (Dan, 2022; Aabe et al., 2019).

Cultural humility: Cultural humility involves taking a step back from our own assumptions and preconceptions, most of which are culturally situated. It reflects a genuine desire to build a respectful, unbiased, and non-judgmental understanding of another person’s subjective reality, context, and intersectional identity (e.g., race, gender, sexual orientation, neurodivergence) (Greene-Moton & Minkler, 2020). Cultural humility is therefore a lifelong commitment targeting unequal power dynamics that requires self-awareness, self-reflection, ongoing curiosity, accountability, personal critique, and integrity (Khan, 2021).

Diet Culture: Diet culture is a set of myths and beliefs that praise and idealise thinness. It represents the conflating of thinness with health, success, and morality (Jovanovski & Jaeger, 2022). Diet culture is a concept that is pervasively reflected in many facets of society, including the healthcare system (e.g., cosmetic surgery, slimming creams, diet pills), the fashion industry, the health and wellbeing industry, and the food industry.

Double empathy problem: Autistic individuals often demonstrate differences in communication and socialisation leading to it being assumed, erroneously, that autistic people lack social skills and empathy (Gernsbacher & Yergeau, 2019). However, research conducted throughout the past decade provides a different and more balanced conceptualisation of these differences. The double empathy problem explains this divide by focusing on a reciprocal lack of understanding between autistic people and non-autistic people, rather than focusing on autistic people’s supposedly impaired social communication as the sole driver of interpersonal communication breakdowns (Milton, 2012; Milton, Gurbuz, & López, 2022; Crompton et al., 2020; Crompton et al., 2021; Milton, Waldock, & Keates, 2023; Sterman et al., 2022).

Dyscalculia: Dyscalculia refers to difficulties related to visualising, conceptualising, and manipulating numbers (including statistics and time) and assimilating mathematical formulas (Johnson, 2022). Dyscalculia is sometimes informally referred to as ‘number dyslexia’ due to its similarities with dyslexia, albeit in relation to numbers rather than letters.

Dysgraphia: Dysgraphia refers to difficulties with handwriting which are connected with fine motor skills (McCloskey & Rapp, 2017) and sensory processing (Danna & Velay, 2015). Dysgraphia can also impact one’s ability to put thoughts into writing.

Dyspraxia: Dyspraxia refers to difficulties with coordination, balance, and planning and processing motor tasks (O’Dea, Stanley, Coote, & Robinson, 2021; Prunty, 2016). For example, someone with dyspraxia may struggle with tying shoelaces, catching or kicking a ball, using scissors, doing gymnastics, and appear clumsy (e.g., dropping things, bumping into objects and furniture).
**Echolalia**: Echolalia refers to someone’s repetition of noises or sounds that they hear (i.e., mimicking, echoing). Echolalia is most commonly associated with autism, although it has also been associated with other forms of neurodivergence (Patra & De Jesus, 2022). Among the neurodivergent community, echolalia is understood as a form of vocal stimming.

**Emetophobia**: Emetophobia refers to extreme fears of vomiting (Faye et al., 2013). Some people struggling with emetophobia may become fearful of eating and subsequently restrict their food intake in an attempt to reduce their risk of vomiting (Jongh, 2012; Dargis & Burk, 2019; Maertens, Couturier, Grant & Johnson, 2017). Emetophobia is sometimes seen in conjunction with avoidant/restrictive food intake disorder (ARFID) (Zickgraf et al., 2022) and/or obsessive-compulsive disorder (OCD) (Weg, 2017).

**Epistemic injustice**: Epistemic injustice refers to the wrongful denial of an individual’s right to create knowledge and manifests in two ways: (1) testimonial injustice: undermining an individual’s capacity and authority to create knowledge due to prejudice; and, (2) hermeneutical injustice: when, because of an individual’s belonging to a stigmatised group, they are not provided with the opportunity and tools to communicate relevant aspects of their own experience (Ritunnano, 2022; Byskov, 2021; Maddie, 2023). Epistemic injustice in relation to health is increasingly being addressed through the use of phenomenological research (see Ritunnano, Papola, Broome, & Nelson, 2023; Kidd, Spencer, & Carel, 2022; Messas, Tamelini, Mancini, & Stanghellini, 2018; Crichton, Carel, & Kidd, 2017; Cavelli, Sharp, Chanen, & Kaess, 2022; Armstrong, 2017; Murray, Milton, Green, & Bervoets, 2022; Rose & Rose, 2023).

Autistic people have been the victims of widespread epistemic injustice for decades (den Houting et al., 2022; Chapman & Carel, 2022; Ne’eman, 2010). Indeed, third-party (i.e., non-autistic) descriptions and interpretations of autism have dominated medical and scientific discourse, whilst autistic people’s insights and input have been systematically discounted and dismissed (Chapman & Carel, 2022; Tas, 2022; Morales, 2022), thus contributing to the dehumanising and stigmatising characterisation of autism that has prevailed (den Houting et al., 2022; Pukki et al., 2022; Sulik et al., 2022).

**Epistemic humility**: Epistemic humility is a form of modesty based on our understanding that what we know and how we know it is and always will be incomplete, which leads to an openness of learning other ways of knowing (Schwab, 2012; Sulik et al., 2022; Kastrup, 2010).

**Executive function**: Executive function represents a wide range of cognitive processes such as memory, planning, attention, focus, time management. Executive function is linked to sensory processing (Adams, Feldman, Huffman & Loe, 2015; Pastor-Cerezuela, Fernández-Andrés, Sanz-Gervera, & Marin-Suelles, 2020) and disordered eating behaviours (Shields et al., 2022; Diaz-Marsa et al., 2023).

Executive function differences, which can sometimes become disabling in accordance with contextual and environmental factors, are associated with ADHD (Silverstein et al., 2020; Neurodivergent Planet, 2021), dyspraxia (Bernardi et al., 2018; Lachambre et al., 2021), dyslexia (Lonergan et al., 2019; Brosnan et al., 2002), and autism (Demetriou, DeMayo, & Guastella, 2019).

**Explicit bias**: Explicit biases refer to biases people are aware of having. This can manifest as hate speech, harassment, overt discrimination, or conscious awareness of not liking certain groups of people while thinking that these exclusionary beliefs are legitimate.

**Exteroception**: Exteroception involves external (environmental) sensory stimuli. The sensory modalities attached to exteroception are vision, hearing, touch, smell, and taste. Atypical exteroception is common in autism (National Autistic Society, n.d.), giftedness (Zabelina et al., 2015; Gere, Capps, Mitchell, & Grubbs, 2009; Deary, 1994), ADHD (Scheerer et al., 2022), anxiety (Cervin, 2022), dyspraxia (Mulligan et al., 2019), dyslexia (Goswami, 2015), TS (Jewers, Staley & Shady, 2013), obsessive-compulsive disorder (OCD) (Dar, Kahn, & Carmeli, 2012; Rieke & Anderson, 2009), and apraxia (Newmeyer et al., 2009).
Exteroception is also an overarching and transdiagnostic factor in mental ill-health (van den Boogert, 2022) as well as cognition more broadly (Saalmann & Kastner, 2015; Wolff et al., 2021; Wolff & Vann, 2019).

Fat: Fat is an adjective that refers to people living in larger bodies.

Fat activism: Fat activism is a rights-based social justice movement focused on raising awareness about issues related to anti-fatness and increasing fat inclusivity and acceptance (McPhail & Orsini, 2021).

Fatphobia: see anti-fatness.

Food insecurity: Food insecurity refers to a state where an individual experiences difficulty obtaining adequate, affordable, and nutritious food/liquids to meet nutritional requirements. Food insecurity is a risk factor for developing eating disorders (Becker, Middlemass, Gomez, & Martinez-Abrego, 2019), particularly bulimia nervosa (Hazzard, Loth, Hooper, & Becker, 2020).

Neurodivergent individuals experience widespread employment discrimination (Raymaker et al., 2023; Wissell et al., 2020; Romualdez, Walker, & Remington, 2021; Amaze, n.d.; Praslova, 2021; Ginsberg et al., 2014) and are therefore at an increased risk of experiencing financial difficulties associated with food insecurity.

Hegemonic normalcy: Hegemonic normalcy (Cooper, 2013) has roots in Western-centric 20th century eugenics and refers to the insidious and culturally situated promotion of a dominant group of people in society as normal (Rosti, 2021) (and therefore presumably superior), whereas minorities (e.g., race, gender, sexuality, ethnicity, disability) are framed through the lens of othering, inferiority, and pathology (e.g., drapetomania (King & Jeynes, 2021), hysteria (Ussher, 2013), homosexuality-as-mental-illness (Sherry, 2004), gender dysphoria (Wiggins, 2020)). As such, difference becomes an anomaly to be prevented, eradicated, and cured rather than a valuable form of diversity to be respected, supported, and embraced. Hegemonic normalcy therefore serves to legitimise and perpetuate oppressive (Shanouda & Yoshida, 2019) societal systems with wide ranging ramifications. In this sense, psychiatric nosology can be conceptualised through the lens of politics, with categorical diagnostic constructs serving as tools of ideological power and societal policing enforcing Western, patriarchal, ideals of normalcy (see Uyeda, 2021; Di Maggio, 2019; VMIAC, 2020; Smith, Bartlett, & King, 2004; Levine, 2023; Lafrance & McKenzie-Mohr, 2013; Koyle, 2018; Colvile, 2016; Middleton, 2021).

Hyperacusis: Hyperacusis refers to extreme sensitivity to sound in relation to volume (i.e., loudness) (Salvi, Chen, & Manohar, 2022).

Hyperfocus: see special interest.

Iatrogenic harm: Iatrogenic harm refers to harm that is caused by health-related interventions and/or professionals, including medical procedures. While rarely acknowledged nor duly investigated, mental health and/or behavioural interventions also carry the potential of causing harm to vulnerable people (Parry, Crawford, & Duggan, 2016; Watson et al., 2022; Dawson & Fletcher-Watson, 2022; Anderson, 2022; Donaldson, 2022; Hoppypelican, 2022; Ibrahim, Cutinha, & Ayton, 2019; Gotzsche & Sorensen, 2020; Wrenaves, 2020; Beale, 2022). As noted by Porsdam Mann, Bradley, and Sahakian (2016), “the incidence of human rights violations in mental health care across nations has been described as a ‘global emergency’ and an ‘unresolved global crisis.’”

Implicit bias: Implicit biases are the kind of biases people may not be aware of having, meaning that they operate subconsciously and often go unquestioned. For example, implicit weight-related biases can manifest as subtle and covert weight loss advice, microaggressions, and unsolicited suggestions that a fat individual should exercise more.

Interoception: Interoception refers to one’s feeling and interpretation of internal bodily signals such as hunger, fullness, pain, thirst, temperature, fatigue, pleasure, or heart rate (Barker, Brewer, & Murphy, 2021; Quadt, Critchley, & Garfinkel, 2018; Morin, n.d.). Interoceptive confusion is common...
among autistic people (Fiene, Ireland, & Brownlow, 2018) as well as ADHDers (Kutscheidt et al., 2019).

Interoception is connected to time processing (Pollatos, Laubrock, & Wittmann, 2014; Di Lernia et al., 2018), perfectionism (Martini, Marzola, Brustolin, & Abbate-Daga, 2021), motivation, attention, memory, emotional responsiveness, sense of self, and goal-directed behaviours (Kennedy & Shapiro, 2009; Tschantz et al., 2022; Price & Hooven, 2018; Strigo & Craig, 2016; Critchley & Garfinkel, 2017; Barrett & Quigley, 2021). Intercapacitiveness also impacts on eating behaviours (Jenkinson, Taylor, & Laws, 2018; Klabunde, Collado, & Bohon, 2017), disordered eating (Martin et al., 2019), and body image (Todd, Aspell, Barron, & Swami, 2019; Monteleone et al., 2021). Furthermore, interoceptive awareness is an overarching construct in mental ill-health more generally (e.g., self-harm, depression, dissociation, anxiety) (Forrest & Smith, 2021; Young, Davies, Freegard, & Benton, 2021; Eggart et al., 2019; Pang et al., 2019).

Intuitive eating: Intuitive eating is an anti-diet eating framework that is grounded in the idea that we have an innate ability to self-regulate our intake by tuning into, and responding to, our body’s interoceptive cues of hunger, thirst, and satiety; avoiding emotional eating; and making peace with food ('unconditional permission to eat') (The Original Intuitive Eating Pros, n.d.; Linardon, Tylka, Fuller-Tyszkiewicz, 2021).

Given that many neurodivergent people experience interoceptive confusion (Fiene, Ireland, & Brownlow, 2018; Kutscheidt et al., 2019), an approach focused on intuitive eating may either need to be extensively adapted to meet their support needs or alternate options sought instead (Collings, 2022; Cobbaert, 2022).

Justice sensitivity: Justice sensitivity describes differences in the way a person perceives, and responds to, injustice from various perspectives (victim, uninvolved observer, passive beneficiary, or perpetrator) (Bondu & Esser, 2015). ADHDers, and particularly the inattentive subtype, report higher levels of justice sensitivity compared to neurotypical people (Schäfer & Kraneburg, 2015; Caldwell, 2022).

Masking (or camouflaging): Due to widespread lack of acceptance towards neurodivergent people and their ways of being, neurodivergent people often mask or camouflage in an attempt to fit in (Radulski, 2022; Cuncic, 2022; Horner, 2023). Masking involves neurodivergent people hiding their natural ways of moving, socialising, and communicating in an effort to avoid becoming targets of discrimination and interpersonal violence (Schneid & Raz, 2020; Radulski, 2023; Gibbs & Pellicano, 2023). Therefore, masking can be understood as a trauma-induced survival mechanism stemming from systemic oppression and minority stress. Masking contributes to poor mental health (Pearson & Rose, 2021; Bradley, Shaw, Baron-Cohen, & Cassidy, 2021; South, Costa, & McMorris, 2021; Cassidy et al., 2020; Hull et al., 2021; Beck, Lundwall, & South, 2020) as well as feelings of emptiness and identity confusion (Stanborough, 2021).

Medical gaslighting: Medical gaslighting refers to health professionals who dismiss, distort, downplay, or deny a patient’s report of illness (e.g., telling a patient that their chest pain is exclusively anxiety-driven without proper investigation) (Cohen Solomon & Bluestein, 2022; Sebring, 2021; Johnson, Nadal, Sissoko, & King, 2021) and is linked to epistemological injustice (Bailey, 2020). Medical gaslighting may manifest as patronising attitudes from mental health professionals as well as the malicious discrediting, misrepresenting, and/or distorting of a patient’s account or narrative (see Lindsey, 2023; Guy, Brown, Lewis, & Horowitz, 2020; Abbott, 2022; Sharda, Baker, & Cahill, 2022; Tormoen, 2019; WrenAves, 2020; Donaldson, 2021; Aftab, 2022; Downs, n.d.). For example, systematically accusing a patient of ‘splitting’ whenever they make a complaint regarding their care in order to legitimise dismissing their statements regardless of merit or validity (see WrenAves, 2020).

Marginalised communities, such as women (Tasca, Rapetti, Carta, & Fadda, 2012; Fraser, 2021; Wolff, 2020), members of the LGBTQIA+ community (lesbian, gay, bisexual, transgender, queer, intersex, asexual) (Sebring, 2021; Hafeez et al., 2017; Gillespie, 2022; Fielding-Singh, 2022), racial
or ethnic minorities (Ruiz, 2020; Watson-Creed, 2022; Wylie & McConkey, 2019), and disabled people (Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability, 2020) experience medical gaslighting at disproportionate rates.

**Meltdowns (and shutdowns):** Meltdowns can present in different ways, such as lashing out (physically and/or verbally), self-harm, situational mutism, extreme demand avoidance, and/or intense crying (Lewis & Stevens, 2023; Delmayne, 2021). Shutdowns involve extreme withdrawal and can sometimes be associated with dissociation (e.g., depersonalisation, derealisation) or catatonia (Moore, Amatya, Chu, & Besterman, 2022). Common triggers include overwhelming demands, social overload (prolonged social interactions), and unexpected changes to routines.

In the case of prolonged exposure to sensory overload (sensory overstimulation) or sensory deprivation (sensory understimulation), these are referred to as sensory meltdowns and sensory shutdowns (Belek, 2018; Embrace Autism, 2019).

**Minority stress:** Minority stress refers to the psychological distress experienced by members of minority communities which results from a combination of systemic oppression, everyday discrimination, and self-stigma (e.g., internalised ableism, low self-esteem, fragmented sense of self, learned helplessness). The concept of minority stress is increasingly being used to conceptualise the high incidence of mental health concerns and illnesses in marginalised populations, including autistic people (Botha & Frost, 2018), ADHDers (Mueller, Fuermaier, Koerts, & Tucha, 2012), people with dyslexia (Shaw & Anderson, 2021), Aboriginal and Torres Strait Islander people (Wylie & McConkey, 2019), people with an intellectual disability (Roth, Peretz, & Barak, 2016), and members of the LGBTQIA+ community (Cardona, Madigan, & Sauer-Zavala, 2022; Pellicane & Ciesla, 2022; Meyer, 2003).

**Misophonia:** Misophonia describes the phenomenon where an individual experiences an extreme negative emotional response, sometimes leading to angry outbursts (i.e., sensory meltdowns), to repetitive sounds such as ticking clocks, eating (chewing) sounds, breathing sounds, beeping sounds, and tapping sounds, or sounds of a certain pitch (Guzick et al., 2022; Jakubovski et al., 2022; Rosenthal et al., 2021; Brout et al., 2018). Misophonia is distinct from hyperacusis as the trigger is unrelated to volume or loudness.

**Monotropism:** Monotropism is an affirming theory of autism first proposed by Dinah Murray and subsequently outlined in the seminal paper ‘Attention, monotropism and the diagnostic criteria for Autism’ (Murray, Lesser & Lawson, 2005). Monotropism draws on the different ways autistic and non-autistic individuals distribute attention resources. The theory proposes that autistic individuals tend to have a monotropic interest system, that is, an interest system that prefers to focus on fewer things in great detail. On the other hand, neurotypical individuals tend to have a polytropic interest system that prefers to focus on many things, in lesser detail (Murray, Lesser & Lawson, 2005; Murray, 2018). Monotropism is thought to be linked with information processing, sensory processing, central coherence, and can also be helpful to understand the influence of an individual’s environment on wellbeing outcomes (Murray, 2018; Woods, 2019).

**Neurodiversity-affirming:** An approach or framework founded on the principles of the neurodiversity paradigm, valuing and respecting neurodivergence and prioritising inclusivity and acceptance.

**Neuroqueer:** Originally coined to be used as a verb, ‘neuroqueering’ describes the act of simultaneously queering (i.e., subverting, defying, liberating oneself, disrupting) heteronormativity and neuronormativity (Walker, 2021).

**Participatory research:** see co-production.

**Palilalia:** Palilalia refers to the repetition of words, syllables, or phrases. Palilalia is distinct from echolalia because the sounds being repeated are unrelated to contextual circumstances. Palilalia is a verbal form of stimming most often associated with autism and TS.
**Pathological demand avoidance or pervasive drive for autonomy (PDA):** Pathological demand avoidance (PDA Society, n.d.) also referred to as demand avoidance or pervasive drive for autonomy (Butler, 2021) refers to feelings of anxiety and extreme overwhelm that arise due to intolerance of uncertainty and perceived intrusion on self-determination and loss of control resulting in an inability to engage in (avoid) certain tasks (demands) (PDA Society, n.d.). This overwhelm can stem from difficulties coping with one’s own expectations of self or that of others, sensory overstimulation, and denial of agency.

**Pica:** Pica is an eating disorder that involves the compulsive ingestion of non-nutritious items such as sand, chalk, eggshells, or paper (Al Nasser, Muco, & Alsaad, 2022).

**Phenomenology:** “Phenomenology is the study of structures of consciousness as experienced from the first person point of view” and can refer to either a discipline of philosophy or a historical philosophical movement (Smith, 2013). As such, the discipline of phenomenology ultimately seeks to describe and genuinely understand a person’s lived experience (Neubauer, Witkop, & Varpio, 2019). As a qualitative research method, it has been promoted as an important tool for psychiatry to embrace as it demands researchers practice epistemic humility, supporting “a transformative process of knowledge co-creation that explicitly foregrounds the value of lived expertise” (Ritunanno, Papola, Broome, & Nelson, 2023, p. 5). Identifying and valuing the lived experience perspective is a key component of achieving dignity-based practice (Abimbola, 2023).

**Proprioception:** Proprioception refers to one’s ability to sense and perceive how their body is positioned and moving without relying on visual cues (McGee, 2018). Proprioception involves complex and interconnected networks of mechanoreceptors located within muscles, joints, tendons, inner ears, and skin. These networks communicate with the central nervous system (spinal cord and thalamus) (Severson, Olson, & O’Connor, 2020; Taylor, 2009). Proprioception plays an important role in movement (coordination, balance, fine motor skills) and body image (Taylor, 2009).

**Psychoneuroimmunology (PNI):** Psychoneuroimmunology refers to the interdisciplinary investigation of interactions between the immune system, the central nervous system, and psychology (Tausk, Elenkov, & Moynihan, 2008; Ader, 2001).

**Psychoneuroendocrinology (PNE):** Psychoneuroendocrinology is the interdisciplinary study of the “complex interactions among the central nervous system, hormones, and behavior” (Rubinow, Crowder, Schmidt, & Rubinow, 2012). There is an important crossover between psychoneuroimmunology and psychoneuroendocrinology. For example, some substances usually considered hormones, such as leptin (Lord, 2006), ghrelin (Dixit et al., 2004), and prostaglandins (Krystal-Whittemore, Dileepan, & Wood, 2016; Whittle, 1977; Zhang et al., 2013) can either influence immune function or take on a pro-inflammatory role altogether in certain contexts.

**Rejection sensitive dysphoria:** Rejection sensitive dysphoria (RSD) refers to intense emotional reactions related to actual or perceived rejection and enhanced sensitivity to criticism. Many autistic people and ADHDers are reported to experience RSD, which can be understood as a manifestation of self-stigma and pervasive trauma associated with systemic oppression (e.g., discrimination, marginalisation, gaslighting, invalidation, bullying) and minority stress (April, 2021).

**Samefoods:** Samefoods is a term that is discussed a lot within the neurodivergent community and is primarily associated with autism (Lynch, 2019a). Autistic people often eat the same foods for prolonged periods of time as this contributes to predictability and a sense of safety. This is an important part of self-regulation for autistic people (Park-Cardoso & Silva, 2022).

**Sensory avoidance or defensiveness:** Sensory avoidance or defensiveness involves proactive strategies to reduce sensory stimulation such as isolating in a quiet space, using noise cancelling headphones, using sunglasses, or dimming the lights.

**Sensory processing:** Sensory processing is an umbrella term referring to an individual’s way of interpreting a wide range of sensory signals, including those associated with exteroception, interoception, and proprioception.
Sensory processing is an overarching factor in neurodivergence (Cobbaert, Minkov, & Zadow, 2021; Cobbaert, Minkov, & Sellen, 2021; Cheung & Siu, 2009; Duncan, Goodwin, Haase, & Wilson, n.d.), movement and motor control (Brooks & Cullen, 2019; Murray & Passmore, 2010; Cullen, Brooks, & Sadeghi, 2009), and cognition (Wolff & Vann, 2019; Halassa & Kastner, 2017; Wolff et al., 2021; Zabelina et al., 2015). According to Wolff et al. (2021), “the thalamus acts as a bridge between sensory perception, cognition and possibly emotion.”

Sensory processing difficulties have also been associated with mental ill-health (Harrison, Kats, Williams, & Aziz-Zadeh, 2019), including eating disorders (Brand-Gothelf et al., 2016). Indeed, a meta-analysis conducted by van den Boogert et al. (2022) concluded that: “sensory processing difficulties can be considered as a non-specific transdiagnostic phenotype associated with a broad spectrum of psychiatric conditions.”

**Sensory seeking:** Sensory seeking involves strategies aimed at increasing sensory input (e.g., rocking, hand flapping, fidgeting, using weighted blankets, echolalia). Sensory seeking is an important self-regulating mechanism for many neurodivergent people.

**Sensory sensitivity:** Sensory sensitivity refers to the impact sensory stimuli have on an individual (Aykan, Vatansever, Doğanay-Erdoğan, & Kalaycıoğlu, 2020). Some individuals are hypersensitive in some sensory modalities (e.g., hearing, vision) but not in others (e.g., touch, taste). Each person’s pattern of sensory sensitivity is unique, and while it remains generally stable over one’s lifetime, it can fluctuate depending on physiological and environmental factors (e.g., pregnancy, menstrual cycle, anxiety, burnout, psychological trauma, depression, season changes, substance use).

**Situational mutism:** Situational mutism refers to someone’s inability to produce speech in certain contexts. For autistic people, situational mutism can stem from a variety of different stressors such as sensory overload or anxiety. Situational mutism is sometimes called selective mutism; however, selective mutism is falling out of favour within the autistic community as it erroneously conveys a sense of choice (selective), which is counter to the reality of lived experience (i.e., an autistic person has limited to no conscious control over this process).

**Social model of disability:** The social model of disability, upon which the neurodiversity paradigm is based, situates the disability as arising from a mismatch between someone’s support and accommodation needs and their environment, rather than being an inherent impairment located solely within an individual (den Houting, 2019; Graby, 2015). The social model of disability therefore opposes the medical model of disability, which paints disability as an individual’s inherent characteristic in isolation from their broader environmental and societal contexts (Chapman, 2021).

**Special interest:** Special interests refer to autistic people’s longlasting and all-consuming interests and passions. Engaging in their special interests provides autistic people with fulfillment and joy and contributes to self-regulation, wellbeing, and quality of life (Taylor et al., 2023; Laber-Warren, 2021; Grove, Hoekstra, Wierda, & Begeer, 2018; Urbanowicz et al., 2019).

ADHDers also experience all-consuming interests, but usually described as being more intense and of a shorter duration (i.e., short-term intense fixations). In this case, the appropriate term is hyperfocus (Ashinoff & Abu-Akel, 2021; Flippin, 2022; Nall, 2021).

**Stimming:** Stimming is a shortened term used in lieu of self-stimulating behaviours. Stimming refers to sensory seeking behaviours such as hand flapping, fidgeting, echolalia, and rocking (Kapp et al., 2019; Nolan & McBride, 2015; Charlton, Entecott, Belova, & Nwaor, 2021).

**Straight-size:** Straight-size refers to people who are not fat.

**Synaesthesia (synesthesia):** Synaesthesia describes the phenomenon where sensory pathways overlap (Simner, 2021; Jewanski et al., 2019). In other words, it is the mixing of the senses. Synaesthesia may involve, amongst others, the ability to smell colours, taste sounds, or an autonomous sensory meridian response (ASMR) to auditory or visual stimuli (Barratt & Davis).
Synaesthesia is linked to anxiety (Simner et al., 2021), autism (Baron-Cohen et al., 2013), and creativity (Mulvenna, 2013).

Richard Cytowic (2018, p. 208) also reports that “nonselective serotonin agonists LSD, mescal, psilocybin, and ayahuasca sometimes induce spontaneous synesthesia, particularly sound-to-sight couplings, and these mostly in response to voices and music.”

Synaesthesia may influence eating behaviours; for example, unusual food-related sensory aversions such as avoiding food items of a certain colour or being unable to eat in the presence of certain sounds or noises (Dickinson, 2009; Stulberg, 2015; Giles, 2017).

Systemic oppression: Systemic oppression is an intentional form of discrimination that refers to the malicious, disadvantageous, and unjust treatment of certain groups of people based on their identity (e.g., sexism, racism, ableism, transphobia, homophobia). Systemic oppression is deeply entrenched in and is reflected at ideological, societal, and institutional levels (see Austin & Bergum, 2004; Equality and Diversity, 2012; Davidson, 2023).

Time processing: Time processing refers to the perception of time. Time processing difficulties are common for ADHDers as they can misjudge the amount of time specific tasks might represent, lose track of elapsing time, or become confused with situating past and/or future events within a timeline. Time processing falls within the broader concept of executive function and is linked to interoception (Di Lernia et al., 2018).

Tokenism: Tokenism is a hypocritical practice carried out to give an appearance of inclusion and acceptance that is purely performative and symbolic (Meehan & Glover, 2007; Ocloo & Matthews, 2016; Farrington, 2016). For example, some mental health researchers may invite someone with lived experience to participate on a project without much regard or consideration for what they convey and try to express. Alternatively, researchers may disingenuously frame their work as co-production but selectively pick people with lived experience whose voices align with their own agenda and/or interests (echo chamber) and exclude the input of people with lived experience whose views are more critical and challenging of the status quo.

Tone policing: Tone policing is a form of emotional abuse in which someone’s idea or standpoint is dismissed solely based on the actual or perceived emotions that accompanied its delivery (e.g., anger, frustration, sadness). As such, the substance of the message itself is automatically discredited regardless of its validity or merit. This form of abuse is often underlined by an ideology of systemic oppression such as racism, sexism, or ableism. For example, a woman’s reaction to sexist discrimination may be framed as the mere and insubstantial rambling of an angry (i.e., ‘emotionally unstable,’ ‘hysterical’) woman, without regard for the validity of the message conveyed (Singh, 2020; Hargis, 2021). Tone policing is connected to epistemic injustice (Bailey, 2018) and the gender stereotyping of emotions (see Plant, Hyde, Keltner, & Devine, 2000; Hutson-Comeaux & Kelly, 2002; Durik et al., 2006).

Weight stigma: see anti-fatness.
Introduction

Neurodivergence has traditionally been characterised in medical and scientific research through the third person and pathologising lens of the medical model of disability, whereby differences are identified as inherent deficits and the disability is situated within the individual (Botha & Gillespie-Lynch, 2022; Brown, Stahmer, Dwyer, & Rivera, 2021; Wodziński, Rządeczka, & Moskalewicz, 2022; Botha & Cage, 2022). In contrast, the neurodiversity paradigm rejects the medical model in preference for the social model of disability, viewing disability as primarily emerging from a mismatch between an individual and their environment (den Houting, 2019; Robertson, 2010; Pellicano & den Houting, 2022; Graby, 2015). The social-ecological model of disability has also been aligned with the neurodiversity paradigm as it accounts for the relational dimensions of disability (i.e., individual contribution to group functioning and dynamics) that are not necessarily captured by the social model alone (Chapman, 2021; Toro, Kiverstein, & Rietveld, 2020; Devereux et al., 2015).

Eating disorders are characterised by disturbances in eating that are significant and persistent. These disturbances negatively impact nutritional status, psychosocial wellbeing and quality of life, and are associated with significant morbidity and mortality (American Psychiatric Association, 2022; Hay, Girosi, & Mond, 2015).

Whilst eating disorders have been estimated to affect at least 4% of the Australian population (Deloitte Access Economics, 2012), research demonstrates that feeding difficulties and eating disorders are overrepresented in neurodivergent people, including in autism (Baraskewich, von Ranson, McCrimmon, & McMorris, 2021; Boltri & Sapuppo, 2021; Gesi et al., 2017; Huke, Turk, Saeidi, Kent, & Morgan, 2013; Mayes & Zickgraf, 2019; Sharp et al., 2013; Sharp et al., 2018; Westwood & Tchanturia, 2017; Zhu & Dalby-Payne, 2019; Zucker et al., 2007; Gillberg, 1983; Leppanen, Sedgewick, Halls, & Tchanturia, 2022; Schröder, Danner, Spek, & van Elburg, 2022; Carpenter et al., 2022; Singh & Seo, 2022), ADHD (Biederman et al., 2010; Biederman et al., 2007; Cortese, Bernardina, & Mouren, 2007; Jahrami et al., 2021; Nazar et al., 2016; Ptáček, Kuželová, Papežová, & Stěpánková, 2010; Levin & Rawana, 2016; Curtin, Pagoto, & Mick, 2013; Villa et al., 2023; Baraskewich & Clinie, 2022; Yao et al., 2019), intellectual disability (Gravesstock, 2000; Hove, 2007), giftedness (Schilder et al., 2017; Blanz et al., 2017; Kothari, Solmi, Treasure, & Micali, 2013; Lopez, Stahl, & Tchanturia, 2010), and TS (Guarda, Treasure, & Robertson, 1999; Hirschtritt et al., 2015; Smith, Rogers, Blissett, & Ludlow, 2020; Smith, Gutierrez, & Ludlow, 2022). However, despite there being a substantial body of literature spanning decades evidencing links between neurodivergence and eating disorders, clinicians’ and researchers’ awareness of this existing knowledge base is only emerging in Australia (see InsideOut Institute, 2021, p. 62).

Eating disorders are difficult to treat and treatments often have only moderate success rates (Treasure et al., 2020). Recent research suggests that autistic people experience worse outcomes in comparison to neurotypical people with therapy modalities currently available for anorexia nervosa (Leppanen, Sedgewick, Halls, & Tchanturia, 2022; Babb et al., 2021; Babb et al., 2022). Similarly, ADHDers affected by eating disorders have been shown to benefit less from currently available treatments compared to their neurotypical counterparts (Testa et al., 2020; Svedlund, Norring, Ginsberg, & von Hausswolf-Juhlin, 2018; Payne et al., 2022). Furthermore, autistic people with mental health concerns and/or illnesses other than eating disorders also report routinely being left without adequate support (Commonwealth of Australia, 2022; Lipinski et al., 2022; Mandy, 2022; Brede et al., 2022; Camm-Crosbie et al., 2019), which may contribute to high suicide rates amongst autistic people (Jachyra, Rodgers, & Cassidy, 2022; South, Costa, & McMorris, 2021; Cassidy et al., 2022).

Research exploring the overlap of eating disorders and neurodivergence has accelerated in recent years, especially in relation to autism and anorexia nervosa (for example Baraskewich, von Ranson, McCrimmon, & McMorris, 2021; Brede et al., 2020; Gesi et al., 2017; Kerr-Gaffney, Halls, Harrison, & Tchanturia, 2020; E. Kinnaird, Norton, Pimblett, Stewart, & Tchanturia, 2019; E. Kinnaird, Norton,
Stewart, & Tchanturia, 2019; Westwood & Tchanturia, 2017). However, research exploring the overlap of the full spectrum of neurodivergence with all eating disorders, and particularly neurodiversity-affirming research that informs the design, implementation, and practice of prevention and treatment initiatives, is currently lacking. In an attempt to bridge this gap, this report combines available research with the perspectives and expertise of neurodivergent individuals with lived experience of eating disorders, weaving these threads together to create a rich tapestry of neurodiversity-affirming practice points and considerations.

A call to action

Drawing on fundamental constructs pertaining to human rights, bioethics, humanistic psychology, phenomenology, and social justice, this report challenges the hegemonic discourse of pathology that characterises traditional understandings of neurodivergent body awareness and image, feeding, and eating experiences. It is a call to action for all eating disorder stakeholders to engage in a radical rethink of how neuronormative feeding and eating practices, which influence research and clinical practice across all levels of eating disorder care, may prove counterproductive or even harmful for neurodivergent people (see Blair, 2023; Elwyn, 2023; Babb et al., 2022; Longhurst & Clark, 2022; Brede et al., 2020).

Creative and collaborative problem-solving is critical to improve the outcomes of all people with feeding difficulties and eating disorders, especially those who are neurodivergent. To this end, we invite readers to join us in practicing epistemic and cultural humility to facilitate progress towards dignity-based practice (Abimbola, 2023). Such humility requires an awareness that our knowledge of the neurodivergent experience of eating disorders, body image, and health more broadly, is currently incomplete, biased, and insufficient. When we combine our humility with epistemic empathy, that is, understanding how others make meaning and accepting different perspectives as valid and valuable, we have in place the necessary foundations to come together to solve complex problems.

This report is not a definitive end-point, rather is it an initial step which aims to encourage reflection, discussion, and collaboration amongst stakeholders to inspire future co-production and co-design of appropriate, effective, and culturally valid neurodiversity-affirming feeding and eating disorder supports across all levels of care.

Making the most of this report

This report is designed for a wide range of stakeholders, especially healthcare professionals (e.g., psychiatrists, psychologists, dietitians, general practitioners, paediatricians, occupational therapists), researchers, academics, educators (e.g., teachers, sport coaches), service managers, and lived experience experts.

The National Eating Disorder Collaboration’s (NEDC) stepped system of care (NEDC, 2022) for eating disorders provides the general structure of this report, with sections dedicated to:

1. Neurodivergence, health, and eating
2. Prevention and advocacy
3. Early intervention
4. Initial response
5. Treatment (community-based, community-based intensive, hospital)
6. Recovery support
The first section titled *Neurodivergence, health, and eating* is the most comprehensive and encompasses a broad overview of the many aspects of neurodivergent lived experience that are inextricably intertwined with eating, feeding, and body image. This section is mainly theory-oriented and is meant to provide readers with a grounded understanding of essential intersectional factors. Subsequent sections, however, are more research- and clinically-oriented with accompanying hands-on practice points and recommendations.

To accommodate individual preferences for accessing references, two forms of referencing are used in this report: in-text hyperlinks to external web sources and formal referencing (APA).
PART 1:
Neurodivergence, health, and eating
Part 1: Neurodivergence, health, and eating

Overview

Neurodiversity-affirming eating disorder care begins with a strong foundational knowledge of neurodivergence and the ways in which environmental, biological, and psychosocial factors are intertwined and may influence feeding, eating, body image, psychological wellbeing, and health more broadly. This section therefore lays out the founding blocks of this knowledge.

Neurodivergence: Prevalence, identification, and intersectionality

Overview

This subsection provides a big picture of neurodivergence in terms of prevalence and age- and gender-based distribution. Issues related to the under-recognition, late diagnosis, diagnostic overshadowing, and misdiagnosis of neurodivergence are also discussed. Moreover, consideration is given to the intersectionality of neurodivergence with gender and sexual diversity as there is a significant overlap between the LGBTQIA+ and neurodivergent communities.

Prevalence of neurodivergence

The Australian Institute of Health and Welfare estimates that 1.1% of Australian males and 0.3% of Australian females are autistic, with prevalence varying across the lifespan (Australian Institute of Health and Welfare, 2017). A gender ratio of 3:1 is consistently reported in epidemiological studies; however, this ratio is likely to underestimate the true prevalence of autism in females (Loomes, Hull, & Mandy, 2017; Rubenstein, Wiggins, & Lee, 2015; Murphy, Flower, & Jellett, 2022). Indeed, a recent study drew on mathematical modelling to conclude that the “true male-to-female ratio appears to be 3:4” and that “80% of females remain undiagnosed at age 18” (McCrossin, 2022).

ADHD prevalence estimates vary based on age, with estimates of childhood ADHD prevalence ranging from 2.2 to 7.4% (Fayyad et al., 2017; Willcutt, 2012), compared to only 2.8% of adults being estimated to be ADHDers; a rate that is likely an underestimate due to adult ADHD being under-identified (Fayyad et al., 2017), particularly in females (Graham, 2021). A large Australian survey from 2013-14 found that 7.4% of 4-17 years old individuals were identified as ADHDers, with males being more likely to be identified (10.4%) than females (4.3%) (Lawrence et al., 2015). However, there is evidence showing that women are significantly under-recognised, with an estimated “half to three-quarters of all women with attention-deficit/hyperactivity disorder (ADHD)” left undiagnosed (Walters, 2018).

The combination of autism and ADHD (i.e., dual diagnosis) was made possible in the 2013 DSM-V, prior to which an individual could not be identified as being both ADHDer and autistic (Taurines et al., 2012). Amongst the neurodivergent community, the combination of autism and ADHD is commonly abbreviated to AuDHD, a convention that will be honoured hereafter in this report.

It is now widely accepted that there is a significant rate of co-occurrence between these two types of neurodivergence. Although estimates vary, rates of autism in children identified as ADHDers have been placed between 13 and 53% (Jensen & Steinhausen, 2015; Sinzig, Walter, & Doepfner, 2009; Zablotsky, Bramlett, & Blumberg, 2020), whereas rates of ADHD in autistic children are higher, ranging from 59 to 76% (de Giambattista et al., 2021; Hours, Recasens, & Baleyte, 2022; Joshi et al., 2014; Joshi et al., 2017; Kaat, Gadow, & Lecavalier, 2013; Salazar et al., 2015).

TS is estimated to have a prevalence of 0.5% in children (Scharf et al., 2015), with some suggesting this is an underestimate of true population prevalence (Freeman et al., 2000). Males are more often identified than females and age of identification is usually between 4 and 6 years of age (Freeman
et al., 2000; Pauls, Fernandez, Mathews, State, & Scharf, 2014). TS has a very high rate of co-occurrence with ADHD and obsessive compulsive disorder (OCD) (Hirschtritt et al., 2015), and frequently co-occurs with autism (Canitano & Vivanti, 2007).

Dyscalculia is estimated to occur in 3 to 6% of school-aged children and appears to be a stable learning disability that persists into adulthood (Shalev, Auerbach, Manor, & Gross-Tsur, 2000). Nevertheless, it is unclear whether dyscalculia is more prevalent in females or males as findings remain heterogenous and inconclusive (Keong, Pang, Eng, & Keong, 2016).

An estimated 3% of the Australian population has an intellectual disability (Australian Institute of Health and Welfare, 2022). Co-occurrence estimates relating to autism and intellectual disability range between 13% and 20% (Kinnear et al., 2019).

Synaesthesia is thought to occur in 18.9% of autistic people, which is 3 times higher than the general population (Baron-Cohen et al., 2013). Synaesthesia has also been associated with giftedness and creativity (Geake, 2008; Mulvenna, 2013).

Little is known about the prevalence of other forms of neurodivergence such as dyspraxia, misophonia, giftedness, and dyslexia (Wagner et al., 2020; Gibbs, Appleton, & Appleton, 2007; Siepsiak et al., 2020; Walsh & Jolly, 2018). However, there is evidence showing that dyslexia, dyspraxia, ADHD, and TS frequently co-occur (Pauc, 2005).

**Gender identity, sexual orientation, and neurodivergence**

Autism and ADHD are correlated with greater prevalence of gender and sexual diversity. Up to 70% of autistic people identify as non-heterosexual (Rose & Heyworth, 2021; McClurg, 2023). Autistic individuals and ADHDers are also up to 7 times more likely than neurotypical people to identify as transgender or gender non-binary (i.e., gender expansive or fluid) (Rose & Heyworth, 2021; Strang et al., 2014; Peachey & Crane, 2023; Cooper, Mandy, Butler, & Russell, 2022). This intersection is captured with the ‘neuroqueer’ concept, which describes the act of queering, subverting, and/or defying heteronormativity and neuronormativity simultaneously (Walker, 2021; Bornstein, 2022; Maroney & Horne, 2022; Walker & Raymaker, 2021; Additude, 2022).

Members of the LGBTQIA+ community are disproportionately affected by eating disorders (Gordon, Moore, & Guss, 2021; Geilhufe et al., 2021) and eating disorder services have been criticised for not meeting the unique needs of members of the LGBTQIA+ community (Riddle & Safer, 2022; Parker & Harriger, 2020; Joy, White, & Jones, 2022; Urban, Knutson, Klooster, & Soper, 2022; Calzo et al., 2020; Bretheron et al., 2021; Kamody, Yonkers, Pluhar, & Olezeski, 2020).

The risk of developing an eating disorder is noticeably increased amongst transgender and gender non-binary individuals, with disordered eating behaviours potentially being influenced by factors such as the desire to align physical body characteristics with gender identity (Riddle & Safer, 2022) as well as minority stress (Mason & Lewis, 2016; Harrop & Kattari, 2022). Restrictive eating disorders can impact the hypothalamic pituitary axis (HPA), which may have gender-affirming effects for transgender and gender non-binary individuals (Riddle & Safer, 2022). For example, dietary restriction in transmasculine and gender non-binary assigned female at birth (AFAB) individuals can lead to ‘gender congruent’ hypothalamic amenorrhoea and a figure with more androgynous features (Kamody, Yonkers, Pluhar, & Olezeski, 2020). In transfeminine and gender non-conforming assigned male at birth (AMAB) individuals, significant dietary restriction reduces the production of testosterone, leading to more ‘gender congruent’ levels of endogenous hormones. In both instances, the weight restoration required for achieving eating disorder recovery increases endogenous hormone levels and can result in increased gender dysphoria (Riddle & Safer, 2022), highlighting the importance of eating disorder clinicians having an awareness and understanding of how gender dysphoria can interact with an individual’s eating disorder presentation.
Research has shown that rates of self-injurious thoughts and behaviours are significantly higher amongst transgender individuals affected by eating disorders compared with their cis-gendered counterparts and transgender individuals without an eating disorder (Duffy et al., 2019). Traditionally, gender-affirming care has been withheld until the patient achieves full recovery, however concerns have been raised that this may place transgender patients with eating disorders at increased risk of harm by delaying gender-affirming care whilst also acknowledging that medical guidance is required to inform hormone treatment in this population (Riddle & Safer, 2022).

It is paramount that further research investigating the wellbeing and mental health of neurodivergent members of the LGBTQIA+ community, including in relation to eating disorders, be conducted in partnership with those whose identity is situated within this intersectionality (Holloway, 2023; Ferenc, Platos, Byrka, & Król, 2022). Delivering eating disorder care that is gender-affirming is an essential component of inclusive and culturally competent healthcare (Riddle & Safer, 2022), and is a prerequisite for achieving neurodiversity-affirming eating disorder care.

**Neurodivergence: Early versus late identification**

Research supports the benefit of identifying neurodivergence, both for the neurodivergent individual and for the people involved in their support and care.

ADHDers who receive a diagnosis in childhood have been found to report better functional performance, health-related quality of life, self-esteem, and work-related productivity compared with late-identified adults (Long & Coats, 2022). Furthermore, parental knowledge of ADHD is beneficial as it has been found to mediate risk-taking behaviour and homework problems in ADHD adolescents (Dekkers et al., 2021).

Delayed autism identification has been associated with a range of negative outcomes such as an increased incidence of mental-ill health when compared to autistic adults identified in childhood (Jadav & Bal, 2022; Bargiela, Steward, & Mandy, 2016; Cassidy et al., 2022; Du Preez, 2022). On the flipside, the beneficial role of early autism identification has been highlighted by Corden, Brewer, and Cage (2021): “individuals who received their diagnosis earlier in life expressed more acceptance of being autistic and a more positive sense of self.”

Whist an early identification has been found to positively influence a neurodivergent individual’s psychological health, a late identification of autism and/or ADHD has also been associated with improvements in overall wellbeing (Huang, Trolley, Foley, & Arnold, 2023; Young et al., 2020; Halleröd, Anckarsäter, Råstam, & Scherman, 2015; Corden, Brewer, & Cage, 2021; Leedham et al., 2019; Murphy, Flower, & Jellett, 2022; Bargiela, Steward, & Mandy, 2016; Fleischmann & Fleischmann, 2012), as well as generating a sense of relief and empowerment resulting in increased self-compassion and self-efficacy (Pellicano et al., 2020; Murphy, Flower, & Jellett, 2022; Leedham, Thompson, Smith, & Freeth, 2020; Lilley et al., 2022; Pawaskar, Fridman, Grebla, & Madhoo, 2020; Young, Tickle, Gillott, & Groom, 2019; Kennefick, 2022).

Shared neurodivergent traits (e.g., justice sensitivity, logic-focused thinking, pattern recognition, outside the box thinking, sensory processing differences, executive function differences, communication and socialising differences) can not only inform one’s sense of self, but can also facilitate a sense of community belongingness (Bertilsdotter Rosqvist et al., 2022; Bertilsdotter Rosqvist, Hultman, & Hallqvist, 2022; Schippers et al., 2022). Some of these shared traits have been conceptualised as representing a unique culture in its own right (Botha & Gillespie-Lynch, 2022; Woods, Milton, Arnold, & Graby, 2018; Lynch, 2019a; Vance, 2021), reinforcing the importance of clinicians practicing with cultural humility when working with neurodivergent individuals.

Person-centred neurodiversity-affirming support may facilitate the development of a positive neurodivergent identity for neurodivergent individuals across the lifespan. A positive neurodivergent identity describes a sense of self that involves pride and a healthy acceptance of self, facilitates
self-advocacy, promotes connection with the wider neurodivergent community, and provides a foundation for countering both self- and public stigma (Shmulsky, Gobbo, Donahue, & Klucken, 2021). Given the prominent role of self-stigma, fragmented sense of self, and low self-esteem in the pathophysiology of eating disorders (Luoma & Platt, 2015; Griffiths, Mond, Murray, & Touyz, 2015; Colmsee, Hank, & Bošnjak, 2021; Gual et al., 2002), the authors predict that promoting a positive neurodivergent identity has potential to act as a protective mechanism mitigating neurodivergent people’s risk of developing eating disorders and assist in promoting long-lasting recovery for those who have eating disorders.

Under-identification, diagnostic overshadowing, and misdiagnoses

Research shows that autism, ADHD, and giftedness are under-recognised in individuals assigned female at birth (AFAB), Aboriginal and Torres Strait Islander people, and in other culturally and linguistically diverse minority groups (Hinshaw, Littman, & Chronis-Tuscano, 2022; Murphy, Flower, & Jellett, 2022; Leedham, Thompson, Smith, & Freeth, 2020; Bianco, Harris, Garrison-Wade, & Leech, 2011; Kerr, 1985; McCrossin, 2022; Reis & Hébert, 2008; Walters, 2018; Bailey & Arciuli, 2020; Lynch & Davison, 2022; Clerkley, 2022; Nylander, Holmqvist, Gustafson, Gillberg, 2013; Chronis-Tuscano, 2022; Young et al., 2020; Nussbaum, 2012; Waite & Ivey, 2009; Malone et al., 2022). Although there is limited research available about other forms of neurodivergence, dyspraxia and dyslexia are also thought to be generally under-diagnosed (Barbiero et al., 2019; Gibbs, Appleton, & Appleton, 2007).

Diagnostic overshadowing and misdiagnosis of autism and ADHD in AFAB individuals is common (Shaw, Doherty, McCowan, & Eccles, 2022; Rudra, 2022; Autistic Science Person, 2022; Ratcliffe, 2022, McCrossin, 2022; Zener, 2019; Dell’Osso & Carpita, 2022; Fusar-Poli, Brondoing, Politi, & Aquiglia, 2022; Stark, 2019; Lai & Baron-Cohen, 2015; Lai, 2022; Huang, Arnold, Foley, & Trollor, 2020; Quinn & Madhoo, 2014; Quinn, 2005; Johnson, Morris, & George, 2020; Waite, 2007; Kentrou, Oostervink, Scheeren, & Begeer, 2021; Au-Yeung et al., 2019; Lipinski et al., 2022; Hinshaw, Littman, & Chronis-Tuscano, 2022; Arnold et al., 2023; Gesi et al., 2021). Many neurodivergent people initially receive incorrect diagnoses such as borderline personality disorder (BPD), bipolar disorder (BD), and generalised anxiety disorder (GAD), which oftentimes either delays or prevents the correct identification of neurodivergence (Rudra, 2022; Iversen & Kidahl, 2022; Enright, 2021; Darling Rasmussen, 2022; Cumin, Pelaez, & Mottron, 2022; Lai, 2022). This can be problematic because erroneous diagnoses may lead to inadequate and/or potentially harmful interventions (Blair, 2023; Stoffers-Winterling et al., 2022; BBC, 2022; Autistic Science Person, 2022).

Borderline personality disorder: A problematic diagnostic construct

Many neurodivergent AFAB individuals receive a label of borderline personality disorder (BPD), hindering the correct identification of neurodivergence (Arnold et al., 2023; McQuaid, Strang, & Jack, 2022; Shannon, 2022; Hunt, n.d.; Autistic Science Person, 2022; Darling Rasmussen, 2022; Lai, 2022; Hartley et al., 2022). A parallel can be drawn between the findings that, in an Australian study undertaken by Lawn and McMahon (2015), 87.8% of respondents labelled with BPD were women, and a mathematical modelling study by McCrossin (2022) suggesting that 80% of autistic females remain undiagnosed and/or misdiagnosed. Indeed, autistic women in Australia report routinely “being dismissed or misdiagnosed” by mental health professionals when seeking an autism diagnosis (Murphy, Flowers, & Jellett, 2022). Additionally, Walters (2018) noted that up to three-quarters of all female ADHDers may still be undiagnosed. As discussed in the previous subsection titled Neurodivergence: early versus late identification, delayed identification of neurodivergence “places significant mental strain on adults, particularly females” (Zener, 2019), and results in lower quality of life (Leedham, Thompson, Smith, & Freeth, 2020; Du Preez, 2022).

The term ‘personality’ is a broad, heterogenous, and non-specific construct that refers to a variety of individual characteristics such as emotional responsiveness, interests, values, self-concept,
interpersonal communication, cognition, interpersonal communication, and behaviours (Mayer, 2007; Plaks, Levy, & Dewk, 2009). As such, the framing of someone’s personality as supposedly ‘disordered’ is dehumanising as it pathologises personhood based on culturally-situated and time-dependent metrics of acceptability and worth. Indeed, as stated by Hartley et al. (2022): “the construct itself, and the ideology that surrounds it, is inherently stigmatising, because of the way it positions dysfunction within the individual, and encapsulates and legitimises pejorative judgements about ‘acceptable’ behaviour or personhood.”

The dichotomous assertion regarding what constitutes a supposedly normal or simple personality versus an abnormal, pathological, complex, and/or unstable personality is a form of systemic oppression rooted in (Western-centric) hegemonic normalcy (see Logan & Karter, 2022; Rost, 2021; Kidd, Spencer, & Carel, 2022; Plant, Hyde, Keltner, & Devine, 2000; Armstrong, 2017; Harding, 2020), as was highlighted by Equality and Diversity (2012): “the mental health system throughout history has medicalised, condoned and ‘treated’ oppressed communities by assumed beliefs about our inherent inferior and unstable nature.” Such epistemic injustice is fundamentally antithetical to the core ideological premises of the neurodiversity paradigm and the social model of disability (Hartley et al., 2022).

Deeming someone’s personality disordered while failing to factor in a wide range of interconnected concepts associated with the lived experience of neurodivergence (e.g., minority stress, the double empathy problem, interpersonal communication differences, masking, rejection sensitive dysphoria, demand avoidance, sensory processing differences, executive function differences, alexithymia) runs counter to the foundational principles of the neurodiversity paradigm, as discussed by Lai (2022): “the construct validity of personality disorders in autistic or other neurodivergent individuals is questionable.” As the term personality is closely related to someone’s core being and is intertwined with one's sense of self, it could be understood that the ideological premises underlying the diagnostic construct of personality disorder are, in fact, inherently ableist and discriminatory by placing a value judgment on someone’s selfhood with conveniently little regard for the role broader societal factors such as systemic oppression play in the development of psychological and emotional distress, including pervasive trauma.

BPD is a contested and controversial diagnostic construct mainly due to its low specificity (Hudziak et al., 1996; Lewis & Appleby, 1988; Tyrer, 2009; Hartley et al., 2022; Harding, 2020; Hodges, 2003; WrenAves, 2020; WrenAves, 2022a; WrenAves, 2023). Concerns also exist regarding the BPD diagnostic construct as it a) was introduced in the DSM at the same time hysteria (North, 2015) and homosexuality-as-mental-illness (Spitzer, 1981) were discarded, b) is predominantly applied to women and members of the LGBTQIA+ community (two marginalised communities) (Shaw & Proctor, 2005; Nicki, 2016; Wolff, 2020; Vanvuren, 2017; VMIAC, 2020; Lawn & McMahon, 2015; Di Maggio, 2019; Jackson & Daffin, 2023; Zimmerman, Benjamin, & Seijas-Rodriguez, 2022; Rodriguez-Seijas, Morgan, & Zimmerman, 2021; Meybodi & Jolfaei, 2022; Lomani, 2022; Reich & Zanarini, 2008), and c) is coincidentally synonymous with character assassination as well as neglect, disdain, and discrimination from health professionals (Papathanasiou & Stylianidis, 2022; Sulzer, 2015; Ferguson, 2015; McKenzie, Gregory, & Hogg, 2022; Rivera et al., 2014; Nehls, 1998; Woollaston & Hixenbaugh, 2008; Koekkoek, van Meijel, & Hutschemaekerd, 2006; Charlie, 2019; Aviram, Brodsky, & Stanley, 2006; Sharda, Baker, & Cahill, 2022; Veysey, 2014; Harvey, 2020; WrenAves, 2022a; WrenAves, 2020; Hoppypelican, 2022; Wolff, 2020; de la Mare, 2023), including in Australia (Klein, Fairweather, & Lawn, 2022; Lawn & McMahon, 2015).

The enduring and persistent nature of the stigma surrounding BPD despite decades of well-meaning yet unsuccessful (see Klein, Fairweather, & Lawn, 2022; Lawn & McMahon, 2015; Papathanasiou & Stylianidis, 2022; WrenAves, 2020) campaigns like BPD Awareness Week should come as no surprise. Indeed, BPD-related stigma is not solely external, but it is embedded within the diagnostic construct itself (VMIAC, 2020), which is also fundamentally a form of instrumental victim-blaming (Lomani, 2022). A significant proportion of those receiving a BPD diagnosis have a history of adverse childhood experiences, particularly sexual abuse (Porter et al., 2020; Lomani, 2022; Nicki, 2016; Wolff, 2020; Walker & Kulkarni, 2019); a form of victimisation shared by many
autistic women, with 9 out of 10 reported to having experienced sexual abuse at least once in their lifetime (Cazalis, Reyes, Leduc, & Gourion, 2022). Bailey and Shriver (1999) have published victim-blaming and misogynistic statements such as: “patients with borderline personality disorder were rated as especially likely to misinterpret or misremember social interactions, to lie manipulatively and convincingly, and to have voluntarily entered destructive sexual relationships, possibly even at young ages.” Another article shared a psychiatrist’s similarly demeaning viewpoint: “if you are talking to a patient and it feels like your internal organs are being turned into hamburger meat, she’s probably borderline” (Lester, 2013). It is worth noting that this psychiatrist instinctively refers to the patient by using the ‘she’ pronoun. These statements illustrate the arbitrariness and oppressive political underpinnings (misogyny, sexism) of this diagnostic construct (see Di Maggio, 2019; VMIAC, 2020; Shaw & Proctor, 2005; Nicki, 2016; Pazzanese, 2020).

Implying that individuals diagnosed with BPD, a significant proportion of whom are AFAB survivors of sexual abuse (Porter et al., 2020; Lomani, 2022), “lie manipulatively and convincingly” (Bailey & Shriver 1999) has led to the weaponisation of BPD aimed at discrediting and trivialising claims of sexual assault; a sexist and victim-blaming attitude representative of rape culture that is pervasive and legitimised to the point of being promoted in peer-reviewed academic publications (Paris, 1995; Bailey & Shriver 1999; Engle & O’Donohue, 2012) and the legal system (Waddingtonweb, 2014). For example, many women in the US Military who came forward with claims of sexual victimisation have been swiftly labelled with BPD and subsequently discharged while their claims were conveniently never investigated (Walters, 2016; Marcotte, 2016). This practice is also observed in the United Kingdom Armed forces, where “hundreds of female members of the Armed Forces who accused their colleagues of rape ‘were misdiagnosed with personality disorder’” and subsequently “written off with emotionally unstable personality disorder and medically discharged” while their claims were never investigated (Lawton, 2023).

While Bailey and Shriver’s (1999) and Lester’s (2013) articles were published over a decade ago, evidence highlights that similar harmful attitudes towards BPD persist (Papathanasiou & Stylianidis, 2022; McKenzie, Gregory, & Hogg, 2022; Sharda, Baker, & Cahill, 2022; Lawn & McMahon, 2015), including within educational and training materials aimed for psychiatrists (Wedlake, 2022). Indeed, in 2022, the UK Royal College of Psychiatrists (RCP) promoted an educational event for its members where individuals labelled with BPD were said to be a “thorn in the flesh of many clinicians” (Wedlake, 2022).

Most importantly, the BPD label has been associated with serious iatrogenic harm, such as (re)traumatisation, worsening of psychological distress, reification of self-hatred and identity confusion, and discriminatory and abusive practices (including microaggressions and gaslighting) from health professionals (Motala & Price, 2022; Sharda, Baker, & Cahill, 2022; Donaldson, 2022; Nicki, 2016; Ussher, 2013; Potter, 2009; Epstein, 2006; Hartley et al., 2022; Harvey, 2020; Charlie, 2019; McKenzie, Gregory, & Hogg, 2022; Panorama team & McLennan, 2022; Macfarlane, 2022; Tormoen, 2019; Ferguson, 2015; Lester, 2013; Nehls, 1998; Hunt, n.d.; Lawn & McMahon, 2015; WarriorWoman, 2022). Therefore, the labelling of vulnerable people with BPD, regardless of neurotype, has the potential to undermine the outcomes of any mental health treatment (see Sharda, Baker, & Cahill, 2022; Klein, Fairweather, & Lawn, 2022; Papathanasiou & Stylianidis, 2022; Lawn & McMahon, 2015; Aviram, Brodsky, & Stanley, 2006; Cavelti, Sharp, Chanen, & Kaess, 2022; Ferguson, 2015; Lester, 2013; Hunt, n.d.; BBC News, 2022; Justice for Sally, 2022; de la Mare, 2023).

Diagnostic constructs are meant to empower the people they represent through a) facilitating access to adequate, culturally valid, and compassionate care pathways, and b) promoting an increased sense of self-awareness, self-compassion, and self-efficacy. Given the many demonstrated shortcomings of and harms caused to vulnerable people by the BPD construct, it would be appropriate to abolish it altogether and reframe the psychological concerns associated with it through a trauma-informed, phenomenological (that is, embracing co-participation principles and a practice of epistemic humility), and culturally valid lens that fully acknowledges the impact of
sexual violence and/or systemic discrimination (e.g., ableism, racism, sexism) on mental ill-health, low self-esteem, and pervasive trauma.

Thorough developmental assessments benefit from considering specific aspects of neurodivergent individuals’ presentations such as masking, rejection sensitive dysphoria, minority stress, sensory processing patterns, alexithymia, and gender diversity in order to improve diagnostic accuracy and avoid risks of harm associated with incorrect, delayed, or missed identification.

**Neurodivergent families**

Neurodivergence has a genetic basis ([Koi, 2021](#)). When working with or supporting a neurodivergent individual, it is reasonable to consider whether the patient’s parent(s) is/are also neurodivergent.

Eating disorder-focused family therapies are recommended as the preferred intervention for adolescents with anorexia nervosa (AN) and bulimia nervosa (BN) ([Hay et al., 2014; NICE, 2017](#)), despite these treatments supporting the attainment of remission in only around 40% of patients ([Lock & Le Grange, 2019](#)). As family therapy requires extensive involvement of parents and other family members in the therapeutic process, identification of parental neurocognitive features relating to social communication, sensory processing, executive function, and alexithymia are important considerations that could be useful to inform neurodiversity-affirming treatment adaptations. Indeed, research exploring parent-child interactions outside of the field of eating disorders shows improved parenting and parent-child outcomes when parental autism ([Smit & Hopper, 2022; Papadopoulos et al., 2019](#)) and/or ADHD ([Waxmonsky et al., 2014](#)) are identified and adequately supported.

**Engaging with the neurodivergent community**

The autistic community has a long history of being dehumanised and oppressed by society in general, and particularly in academia and medicine ([Botha & Gillespie-Lynch, 2022; Dyck & Russell, 2020; Legault, Bourdon, & Poirier, 2021; den Houting et al., 2022; Gillespie-Lynch et al., 2017; Brown, Stahmer, Dwyer, & Rivera, 2021; Des Roches Rosa, 2022; Puukki et al., 2022; Sulik et al., 2022](#)). Stigma and interpersonal violence victimisation are unfortunately common for autistic individuals ([Gibbs & Pellicano, 2023; Weiss & Fardella, 2018; Pearson, Rees, & Forster, 2022; Lewin & Akhtar, 2021](#)) as well as those who identify with other forms of neurodivergence ([Morton et al., 2022; Mueller, Fuemaier, Koerts, & Tucha, 2012; Godfrey et al., 2021; Ingesson, 2007; Lebowitz, 2016; Pelleboer-Gunnink, van Oorsouw, van Weeghel, & Embregts, 2019; Walker, Shaw, Reed, & Anderson, 2021](#)).

To counter this systemic power imbalance and to ensure that research is adequately addressing community needs, research about neurodivergent people needs to be co-designed and participatory, moving beyond tokenism ([Fletcher-Watson, Adams & Pellicano, 2018](#)).

Guidelines to support participatory research with the autistic community are available from Autism CRC ([den Houting, 2021](#)) and The Academic Autism Spectrum Partnership in Research and Education (AASPIRE) practice-based guidelines ([Nicolaidis et al., 2019](#)). Similar guidelines are required for other forms of neurodivergence to foster a respectful and collaborative approach to problem-solving between mental health researchers and clinicians and the marginalised communities they serve.
Research considerations:

- Neurodiversity-affirming research that captures the diversity and dimensionality of neurodivergent profiles, including for those who are traditionally under-identified and/or misdiagnosed, and is cognisant of the heritability of neurodivergence, intersecting minority identities, higher reported trauma prevalence, legacy of dehumanisation and oppression at the hands of psychiatry and society, and the ways in which neurodivergence can influence feeding and eating is urgently required across the spectrum of feeding and eating disorder care.
- Research should adhere to co-design and participatory guidelines to prevent tokenism, epistemic injustice, and subsequent iatrogenic harm.
- Research that specifically explores the intersection of the neurodivergent and LGBTQIA+ communities, and the ways in which their support needs in relation to eating and body image may vary from cis-gendered, heterosexual, and neurotypical individuals is required to inform socially valid eating disorder service adaptations.

Practice and service considerations:

- Improved access to timely and affordable assessment services for autism and ADHD is a priority, particularly in patients presenting with feeding difficulties or an eating disorder, as well as in marginalised populations such as AFAB individuals, members of the LGBTQIA+ community, Aboriginal and Torres Strait Islander people, and culturally and linguistically diverse individuals.
- Clinicians should be aware of the risks for harm posed by late identification and misdiagnoses of neurodivergence, especially in neurodivergent AFAB individuals.
- When suspected, family members should be screened for neurodivergence following the identification of a child.
- Services and clinicians should be prepared to either refer patients to, or offer, post-identification neurodiversity-affirming support services.
- All interventions and supports must understand the importance of encouraging the development of a positive neurodivergent identity for the individual and their family.
- Emancipation of neurodivergent people is contingent on emancipation for gender expansive people. Therefore, neurodiversity-affirming eating disorder services and clinicians must provide gender-affirming care.

Prevalence of eating disorders: General and neurodivergent populations

Overview

Feeding and eating disturbances can occur across the lifespan and range from mild and transient disturbances such as self-limiting selective eating in childhood, through to more serious, chronic feeding and eating disorders which can be associated with negative impacts on health, quality of life, and morbidity and mortality.

Research shows that neurodivergent people are disproportionately affected by feeding and eating difficulties, with many experiencing eating disorders. However, the factors underlying feeding difficulties and eating disorders in neurodivergent people are often different from neurotypical people and as such, adapted supports and interventions are warranted.
Feeding and eating disorders: General population prevalence data

Data from Western countries indicate that, by adulthood, 5.5 to 17.9% of young AFAB individuals and 0.6 to 2.4% of young AMAB individuals have experienced an eating disorder (Silén & Keski-Rahkonen, 2022). Prevalence for specific eating disorder subtypes in the general population have been reported as follows:

- Other specified feeding and eating disorders (OSFED): 0.6-11.5% AFAB; 0.2-0.3% AMAB
- Unspecified feeding and eating disorders (UFED): 0.2-4.7% AFAB; 0-1.6% AMAB
- Anorexia nervosa (AN): 0.8-2.6% AFAB; 0.1-0.3% AMAB
- Binge eating disorder (BED): 0.6-6.1% AFAB, 0.3-0.7% AMAB
- Bulimia nervosa (BN): 0.8-2.6% AFAB, 0.1-0.2% AMAB (Silén & Keski-Rahkonen, 2022)
- Avoidant restrictive food intake disorder (ARFID): 0.3% (Hay et al., 2017)
- Pica: may occur in up to 5% of 7 to 13-year-old children (Murray et al., 2018)
- Rumination: has been reported to occur in less than 3% of 7 to 13-year-old children (Murray et al., 2018).

Feeding and eating disorders: Neurodivergence

A. Childhood

Neurodivergent children are shown to experience feeding difficulties and eating disorders at higher rates compared to neurotypical children. Here, we lay out the pertinent research discussing this overlap.

i) Autism

Feeding difficulties are commonly reported to occur in autistic children (Cermak, Curtin, & Bandini, 2010; Råstam et al., 2013; Suarez, Atchison, & Lagerwey, 2014; Zhu & Dalby-Payne, 2019; Mayes & Zickgraf, 2019; Leader et al., 2021; Elsayed, Thompson, Conklin, & Watson, 2022; Postorino et al., 2015). For example, Mayes and Zickgraf (2019) found that around 70% of autistic children demonstrated ‘atypical’ eating behaviours and Leader et al. (2021) found that 90% of parents or caregivers reported their autistic child experienced feeding difficulties. The variation in prevalence estimates is likely driven by a lack of consensus regarding definitions of what constitutes ‘atypical’ eating behaviours and feeding difficulties, alongside the use of different measurement tools and sample populations (Baraskewich et al., 2021).

Eating behaviours commonly identified in autism include selective eating (having a restricted variety of preferred and accepted foods, food aversions, food refusal, and food neophobia), interfering mealtime behaviours, pica, strong preferences (e.g., food preparation and presentation, accepted food brands, cutlery, and crockery), rapid or slow eating, lack of interest in eating, loss of control eating, and behaviours such as pocketing food in the oral cavity (Mayes & Zickgraf, 2019; Cermack, Curtin, & Bandini, 2010; Postorino et al., 2015).

The atypical feeding and eating behaviours observed in autism are suggested as potentially being related to sensory processing differences (e.g., sensory avoiding, sensory seeking, interoceptive confusion, alexithymia) (Nimbley et al., 2022; Mathew et al., 2022; Cermack, Curtin, & Bandini, 2010; Chistol et al., 2018; Kral et al., 2015), cognitive rigidity (e.g., insistence on sameness, preference for routine) (Mayes & Zickgraf, 2019; Postorino et al., 2015; Zickgraf et al., 2022), social communication differences (Zhu & Dalby-Payne, 2019), and executive function (Kinnaird et al., 2019).

Gastrointestinal problems, which are common in neurodivergent children (Leader et al., 2021; Donaghy, Moore, & Green, 2023), and medications such as stimulants (Cortese et al., 2013) and
antipsychotic medications (Jobski et al., 2016; Mukherjee et al., 2022) are other potential factors that may influence appetite and food intake. It is relevant to acknowledge that antipsychotic medications can influence growth, metabolism, and/or weight (Dayabandara et al., 2017; Cortese et al., 2013).

Childhood feeding difficulties are often reported as a source of concern and stress for parents of autistic children, relating to concerns regarding the potential inadequacy of their child’s diet, behaviours that interfere with mealtimes, and a sense of frustration at not being able to easily meet idealised neuronormative family feeding practices and receiving ineffective advice from outsiders (Burkett et al., 2022; Cermack, Curtin, & Bandini, 2010; Bamigbade et al., 2022).

Despite evidence supporting the contribution of sensory processing (Nimbley et al., 2022; Mathew et al., 2022; Cermack, Curtin, & Bandini, 2010; Chistol et al., 2018; Kral et al., 2015) and cognitive differences (Mayes & Zickgraf, 2019; Postorino et al., 2015; Zickgraf et al., 2022) to feeding difficulties amongst autistic youth, researchers have also suggested that such interfering mealt ime behaviours may arise due to “deficits of social compliance” (Zhu & Dalby-Payne, 2019). At best, it is possible that such a suggestion is implying that if only autistic children would be a little bit more ‘agreeable’ to the demands placed on them by adults, that they may be open to eating non-preferred foods or behaving in ways that do not upset or disturb others involved in the mealtime. At worst, it could be seen to suggest that the autistic child’s behaviour arises because they are unwilling or unable to subjugate their own needs and endure, without complaint, an eating experience that is aversive, in order to prioritise the enjoyment of the mealtime for others. Whilst this discussion does not seek to minimise the importance of supporting an appropriate nutritional intake for all children, it does seek to highlight how a lack of insight into the lived experience of neurodivergent individuals can perpetuate neurotypical ignorance (Catala, Faucher, & Poirier, 2021), derailing the development of more effective interventions while perpetuating epistemic injustice.

Qualitative research with autistic adults includes recollections of traumatic childhood experiences that involve being forced to endure overwhelming environments (i.e., sensory trauma) and trauma related to violations of autonomy such as being forced to consume non-preferred foods (i.e., food trauma) (Kerns et al., 2022). Such reports are highly relevant as paediatric feeding interventions largely rely on approaches grounded in operant conditioning (i.e., behaviourism) and systematic desensitisation (Sharp et al., 2010; Marshall et al., 2014; Ledford et al., 2017). Despite behavioural interventions being hailed as the gold standard for treating paediatric feeding problems (see Sharp et al., 2010; Sharp et al., 2019; Sarcia, 2021), reviews indicate that whilst there may be some positive effect of such interventions on food acceptance (volume), they have minimal influence on interfering mealt ime behaviours, represent a low-level of evidence (Marshall et al., 2014; Ledford et al., 2017), and do not capture how new feeding behaviours are adapted and maintained outside of the feeding intervention setting (Ledford et al., 2017).

Whilst some research has found an association between autism, selective eating, and inadequate intake of certain nutrients (Sharp et al., 2019), others have not found any clinically relevant differences in nutrient intake (Arija et al., 2023). If a child’s restricted eating is suspected to be placing the child at nutritional risk, it is recommended that a thorough nutritional assessment is undertaken by an Accredited Practising Dietitian (APD) with skills in paediatric nutrition and neurodiversity-affirming practice to assess nutritional status and the adequacy of the child’s diet. This assessment will inform whether there is a need for feeding and/or nutritional intervention.

Feeding difficulties usually observed in autism relating to food selectivity and food neophobia are closely aligned with avoidant/restrictive food intake disorder (ARFID). Unsurprisingly, ARFID has been found in 22.5% of childhood eating disorder presentations (Nicely et al., 2014) and is commonly associated with autism. A recent study estimated ARFID prevalence to be 21% of autistic individuals, with 17% of parents of autistic children also suggested to be at risk (Koomar et al., 2021). ARFID research is in its infancy, however, future participatory research should aim to provide
greater insight into the feeding difficulties common in autism and other forms of neurodivergence, and those observed in ARFID, including how they can be distinguished and how they overlap (Baraskewich et al., 2021).

ii) ADHD

ADHD children are at increased risk of disordered eating and eating disorders. Jahrami et al. (2021) found that eating disorder risk was 3 times (31.4%) higher for ADHD children than non-ADHD children (12.1%). Eating disorder presentation and associated risk factors may also differ by different ADHD subtype, with one study finding that ADHD-combined AFAB adolescents experienced higher rates of bulimia nervosa, body image dissatisfaction, disruptive and internalising problems, parent-child and peer relation problems, and medication use when compared to both ADHD-inattentive AFAB individuals and the control group (Mikami et al., 2008).

Loss of control eating is one disordered eating behaviour that describes eating an amount of food which is either objectively or subjectively large accompanied with a sense of loss of control over the eating experience (Kurz et al., 2017). Loss of control eating has been conceptualised as childhood binge eating disorder and is often associated with ADHD (Reinblatt et al., 2015). Whilst loss of control eating is a relatively common phenomenon in childhood (Tanofsky-Kraff et al. 2004), risk of loss of control eating in ADHD children has been estimated to be 12 times higher than the non-ADHD population (Reinblatt et al., 2015).

Several factors have been proposed as potential contributors to the observed association of ADHD and disordered eating, including:

- Common neurobiological mechanisms influencing dopamine regulation,
- Neurocognitive differences (e.g., executive function differences, alexithymia, interoceptive confusion),
- Impulsivity and/or inattention,
- Internalised emotional distress,
- Interpersonal violence,
- Genetics (for detailed review see Levin & Rawana, 2016).

ADHD children appear to be at increased risk of disordered eating and eating disorders, suggesting that eating disorder care pathways will benefit from incorporating ADHD screening in their assessment processes, facilitating appropriately tailored psychoeducation and interventions (Villa et al., 2023). Concurrently, incorporating eating disorder screening into ADHD care pathways to facilitate early identification and support is likely to be beneficial (Levin & Rawana, 2016).

iii) AuDHD

The co-occurring presentation of autism and ADHD has received less research attention than each neurotype singly but is associated with higher rates of feeding difficulties and eating disorders. A study compared autistic, ADHD, and AuDHD children, and found that AuDHD children had the highest prevalence of restrictive eating behaviours (5.6% overall: boys 4.2% and girls 9.7%) (Rastam et al., 2013).

Furthermore, research looking at autistic and ADHD traits in children found that those with high autistic and ADHD traits show increased rates of both food avoidant (i.e., increased undereating, satiety responsiveness, slowness to eat, selective eating, and lower levels of food enjoyment) and food approach (i.e., binge eating and increased food responsiveness) behaviours compared to neurotypical children (Harris et al., 2022). Interestingly, children with high autistic traits were more likely to demonstrate food avoidant behaviours, and children with higher ADHD traits were more likely to demonstrate food approach behaviours, suggesting that paediatric feeding and eating advice will benefit from being specifically tailored to meet individual needs (Harris et al., 2022).
iv) Tourette's syndrome

TS has been associated with feeding and eating problems in children and adolescents (Smith & Ludlow, 2022; Bamigbade et al., 2022). Given the high rates of co-occurring neurodivergent conditions in TS, it is not surprising that rates of selective eating and emotional overeating have been found to be similar to Autistic and ADHDer children (Smith & Ludlow, 2022; Bamigbade et al., 2022) to those reported by parents of autistic children (for example Adams et al., 2020; Burkett et al., 2022; Curtiss & Ebata, 2021). Smith & Ludlow (2022) attempted to identify whether or not children with a TS diagnosis without identified cooccurring neurodivergent conditions differed in their eating behaviour. They found that whilst the TS group demonstrated similar levels of selective eating and emotional overeating as the ADHD and Autistic groups, the TS group appeared more food responsive than the other neurodivergent groups. This suggests that it is important to monitor for feeding and eating concerns amongst TS children, even when they have not been identified with a cooccurring neurodivergent condition.

B. Adolescence and adulthood

Adolescent and adult ADHDers (Levin & Rawana, 2016; Nazar et al., 2016), autistic individuals (Boltri & Sapuppo, 2021; Gesi et al., 2017; Huke et al., 2013; Saure, Laasonen, & Raevuori, 2021; Westwood & Tchanturia, 2017), and those with TS (Guarda et al., 1999; Hirschtritt et al., 2015; Smith et al., 2020; Smith et al., 2022) are at an increased risk of feeding and eating problems and developing eating disorders compared to neurotypical individuals.

i) Autism

Research identifies that all eating disorder subtypes are overrepresented in autistic people (Gesi et al., 2017). However, research exploring autism and eating disorders has focused predominantly on the overlap of autism, or autistic traits, with restrictive eating disorders, in particular, anorexia nervosa (Boltri & Sapuppo, 2021; Brede et al., 2020; Dell’Osso et al., 2018; Gillberg, 1983; Huke et al., 2013; Huke, Turk, Saeidi, Kent, & Morgan, 2014; Kerr-Gaffney et al., 2021; Saure, Laasonen, & Raevuori, 2021; Tchanturia et al., 2013; Tchanturia, Smith, Glennon, & Burhouse, 2020; Westwood, Mandy, & Tchanturia, 2017; Schröder, Danner, Spek, & van Elburg, 2022; Longhurst & Clark, 2022) and, to a lesser degree, ARFID (Iron-Segev et al., 2020; Tanner, Thomas, Pottschimidt, Lutter, & Michaelson, 2021; Farag et al., 2022; Dovey, Kumari, & Blissett, 2019). Recent research has also identified an association between autistic traits and orthorexia nervosa (Dell’Osso et al., 2022).

Whilst estimates have varied, it is understood that between 20 to 37% of individuals with anorexia nervosa are also autistic (Westwood & Tchanturia, 2017; Adamson et al., 2022). However, this may be an underestimate considering that autism is often misdiagnosed and underdiagnosed in autistic AFAB individuals (McCrossin, 2022).

Although research exploring the association between autism and ARFID is nascent, autism has been identified as a potential factor increasing the risk of developing ARFID (Iron-Segev et al., 2020; Tanner, Thomas, Pottschimidt, Lutter, & Michaelson, 2021; Farag et al., 2022; Dovey, Kumari, & Blissett, 2019). As noted above, ARFID prevalence has been estimated as 21% of autistic individuals, with up to 17% of parents of autistic children also identified as being at risk (Koomar et al., 2021).

ii) ADHD

Data from adult ADHD research identifies that the odds were four times higher for ADHDers being diagnosed with any eating disorder, compared to non-ADHDers (Nazar et al., 2016). ADHD has been associated most often with bulimia nervosa and binge eating disorder, although there is a similar risk across all eating disorder subtypes (Fernandez-Aranda, 2013; Nazar et al., 2016).
Nazar et al. (2016) found that almost 30% of women seeking treatment from a weight-loss clinic were ADHDers, and that ADHD was associated with more significant binge eating, bulimic symptoms, and depression. A similar prevalence was reported for adolescents seeking bariatric surgery (Leib et al., 2019).

Inattention, a common feature of ADHD, is associated with both binge and restrictive eating in ADHDers (Kaisari et al., 2018). Negative affect has also been found to mediate the relationship between ADHD and eating disorders (El Archi et al., 2020). Interestingly, differences have been identified in eating disorder presentations between autistics and ADHDers, with ADHDers reporting higher levels of body dissatisfaction and obsessive thoughts about calories than autistic participants (Karjalainen et al., 2016; Harris et al., 2022a).

### iii) AuDHD

With the dual diagnosis of autism and ADHD only being made possible through the implementation of the DSM-V, released in 2013 (American Psychiatric Association, 2013), the vast majority of eating disorder research has considered, and continues to consider, the diagnostic entities of autism and ADHD separately. Therefore, there is a missed opportunity to account for the high degree of co-occurrence that actually exists (Hours, Recassens, & Baleyte, 2022).

### iv) Tourette's Syndrome

Whilst evidence suggests that feeding and eating concerns such as selective eating and food neophobia are more prevalent in people with TS than in the neurotypical population (Smith et al., 2022), research exploring the intersection of clinical feeding and eating disorders with TS is in its infancy. Anorexia nervosa and bulimia nervosa were reported in 2% of a sample of over 1300 individuals with TS, occurring more often in AFAB individuals and in those with co-occurring OCD (Hirschtritt et al., 2015). This overlap of TS, OCD, and eating disorders has been identified previously with Guarda et al. (1999).

### v) Other Types of Neurodivergence

There is evidence suggesting an increased risk of developing eating disorders among gifted people (Kothari, Solmi, Treasure, & Micali, 2012; Blanz, Detzner, Lay, Rose, & Schmidt, 1997; Schilder et al., 2016; UCL News, 2012), particularly AFAB individuals (Krafchek & Kronborg, 2020).

Research considering other forms of neurodivergence in relation to eating disorders is minimal, but emergent research exists pointing to a potential association with dyspraxia (Swift, n.d.), misophonia (Kluckow, Telfer, & Abraham, 2014; Guzick et al., 2022), synaesthesia (Simner, 2011), and intellectual disability (Gravestock, 2000).

These studies point to the distinct, and potentially cumulative impact, of different forms of neurodivergence on feeding and eating behaviours and eating disorder risk. Further research will ideally build our understanding of these different risk factors and impacts to facilitate improved prevention and treatment efforts.

**Neurodiversity-affirming care: Eating supports and interventions**

A neurodiversity-affirming care framework provides an alternative to those informed by the medical model. The medical model has traditionally characterised neurodivergent feeding and eating behaviours as inherently dysfunctional, maladaptive, problematic, and, for children, as the cause of parental distress (Sharp et al., 2017; Burkett et al., 2022; Cermack, Curtin, & Bandini, 2010; Bamigbade et al., 2022). In contrast, taking a neurodiversity-affirming lens encourages a different
interpretation through the critical challenging of the neuronormative status quo and the practice of epistemic humility.

A neurodiversity-affirming care framework includes the following core elements:

- Is founded on the social model of disability and grounded in a human rights approach,
- Practices epistemic justice and empathy,
- Takes a strengths-based approach and presumes competence,
- Respects individual autonomy: practices are humanistic, holistic, and client-centred, activities are client-led, consent is sought and maintained, and self-advocacy is encouraged,
- Ableist neuronormative expectations and goals are critically challenged: differences are respected and accommodated, and supports do not seek to 'normalise', 'treat', or 'cure' neurodivergence,
- Acknowledges and validates all authentic neurodivergent social communication and respects and accommodates communication preferences,
- Rejects interventions that are based on radical behaviourism and behavioural principles underlying operant conditioning (e.g., Applied Behaviour Analysis) (Reframing Autism, 2022), and/or that encourage masking, induce trauma, compromise autonomy, or limit authentic neurodivergent ways of being (e.g., monotropism, stimming) (Therapist Neurodiversity Collective, 2022),
- Is trauma-informed, gender-affirming, intersectional, and works towards dismantling oppression for all marginalised identities.

This framework can be utilised to inform research, plan supports and interventions across all stages of care, and guide the evaluation of socially valid outcomes. An example of how this can be operationalised is provided below, where the concern relates to a neurodivergent individual engaging in behaviours to avoid eating a specific food or to avoid joining in a family or group-based meal. A neurodiversity-affirming exploration may consider the following:

- The neurodivergent person may be overwhelmed by their environment (e.g., the food, the smell, the sounds, the lights) and the lack of control they feel over it,
- They may feel anxious as historically, eating and mealtimes are times when they are routinely reprimanded for authentic neurodivergent behaviours (e.g., rocking, fidgeting, not being able to sit still, clumsiness when using cutlery, dysphagia),
- They may feel uncomfortable because, at the meal table, they may often have to endure correction and coaching on neuronormative rules around social communication and eating (e.g., eye contact, small talk, turn taking in conversation),
- They may have food-related trauma from having endured coercive and/or forceful feeding practices and been denied bodily autonomy,
- That mealtimes often involve multiple demands (explicit and implicit) that set expectations as part of the neuronormative eating experience which may be overwhelming enough to trigger demand avoidance (PDA) and/or a meltdown,
- They could be experiencing interoceptive confusion, therefore finding it difficult to connect with a sense of hunger and/or are feeling full after ingesting small amounts of food at the time the eating event is taking place,
- They may not be afforded (either explicitly, or implicitly, through social expectations) the use of effective and regulating strategies such as stimming, sunglasses, dimmed lighting, eating while standing, eating alone, and/or noise cancelling headphones, which help them overcome sensory overwhelm.

This incomplete list of potential explanations for a neurodivergent individual's refusal to engage in a neuronormative eating experience demonstrates that such behaviours are not manipulative or maladaptive, they are fundamentally adaptive.
Research considerations:

- The high rates of neurodivergence in eating disorder populations require greater acknowledgement and must be accounted for in data collection, analyses, and discussions to deliver insights that reflect reality and inform practice that is transferable from research settings to clinical practice.

- Eating disorder research which takes a neurodiversity-affirming approach is essential.

- More eating disorder research investigating forms of neurodivergence other than autism and ADHD (e.g., dyspraxia, apraxia, intellectual disability, giftedness, dyslexia, dyscalculia) is required.

- More research that accounts for the high degree of co-occurrence between different forms of neurodivergence (e.g., autism and ADHD) in relation to eating disorders is required.

- In line with the preferences of the neurodivergent community, all research must centre the voices of neurodivergent people with lived or living experience of eating disorders and be ethically co-produced.

Practice and service considerations:

- The early identification of neurodivergence amongst AFAB individuals, members of the LGBTQIA+ community, Aboriginal and Torres Strait Islander people, and culturally and linguistically diverse people requires increased access to assessment services, as well as assessment tools that can accurately identify neurodivergence in individuals who are not AMAB and/or Caucasian.

- Eating disorder (and other health) services and clinicians will benefit from a deeper understanding and awareness of the high prevalence of neurodivergence in eating disorder populations.

- Identifying neurodivergence in individuals presenting with feeding difficulties or eating disorders will guide and facilitate the individuation of affirming accommodations and supports.

The neurodivergent eating experience

Overview

This section explores the diverse range of factors that are relevant to consider when working towards a deeper understanding of neurodivergence. It draws on available research, as well as clinical and lived experience expertise.

Given that atypical sensory processing is a prominent feature of neurodivergence, this section focuses on the different ways sensory processing may influence eating and feeding from a biopsychosocial perspective. Indeed, sensory processing has a wide range of ramifications in relation to eating, including with regards to food aversions, hunger and satiety cues, social eating, body image, insistence on sameness, emotional eating, and intuitive eating.

Sensory processing

The main constructs pertaining to sensory processing are exteroception, interoception, and proprioception. All interact with and influence body image, eating and feeding behaviours, and other activities of daily living in different ways.
Adaptations and accommodations that account for sensory processing differences and associated increased risk of developing body image disturbances, feeding difficulties, and eating disorders. These differences in sensory processing likely contribute to neurodivergent individuals being at an increased risk of developing misophonia and eating disorders. For example, research exploring misophonia in 102 youth found eating sounds (94%), breathing sounds (84%), throat sounds (66%), or tapping sounds (54%) were triggering (Guzick et al., 2022). Exposure to these trigger sounds commonly led to feelings of disgust, anger, annoyance, irritation, and worry/anxiety, and as a result, had prompted responses in the past that were verbally (85%) or physically (50%) aggressive (Guzick et al., 2022). Reported accommodations that the youth undertook to avoid trigger exposure included avoiding a family member (80%) and eating alone (76%), with most reporting anticipatory and/or reactive avoidance behaviours as a coping tool that they employed (Guzick et al., 2022).

Misophonia refers to a phenomenon where an individual experiences an extreme negative emotional response to a simple, repetitive sound. Whilst an extremely limited amount of research has explored the relationship between misophonia and eating disorders (Kluckow, Telfer & Abrahams, 2014), some recent research gives grounds to the suggestion that misophonia may play an important role for those with eating disorders. For example, research exploring misophonia in 102 youth found eating sounds (94%), breathing sounds (84%), throat sounds (66%), or tapping sounds (54%) were triggering (Guzick et al., 2022). Exposure to these trigger sounds commonly led to feelings of disgust, anger, annoyance, irritation, and worry/anxiety, and as a result, had prompted responses in the past that were verbally (85%) or physically (50%) aggressive (Guzick et al., 2022). Reported accommodations that the youth undertook to avoid trigger exposure included avoiding a family member (80%) and eating alone (76%), with most reporting anticipatory and/or reactive avoidance behaviours as a coping tool that they employed (Guzick et al., 2022).

These differences in sensory processing likely contribute to neurodivergent individuals being at an increased risk of developing body image disturbances, feeding difficulties, and eating disorders. Adaptations and accommodations that account for sensory processing differences and associated...
support needs are therefore an important consideration for preventing eating disorders and body image issues, as well as improving treatment outcomes.

**Psychoneuroimmunology and sensory processing**

The thalamus plays a central role in the processing and relaying of sensory information (thalamo-cortical connectivity), including exteroception, proprioception, and interoception (Schulz & Vogele, 2015; Petrovich, 2021; McCormick & Bal, 1994). As previously noted, sensory processing influences cognition and movement. The thalamus is thus an important factor in guiding goal-directed and adaptive behaviours (Penzo & Gao, 2022).

Research suggests that the thalamus contains dense dopaminergic and histaminergic networks (Moghaddam, 2010; Sánchez-González, Garcia-Cabezas, Rico, & Cavada, 2005; Jin, Kalimo, & Panula, 2002; Ellenbroek, 2013), pointing towards an important axis by which the immune system may influence mental states and behaviours through the modulation of dopamine, which acts as a sensory gating agent (Jacob & Nienborg, 2018; Schwarzkopf, Mitra, & Bruno, 1992; Eshel & Tian, 2014).

Histamine, primarily released by mast cells as part of various immune and endocrine processes, modulates dopamine (Koski et al., 2020; Flik et al., 2015; Moreno-Delgado et al., 2020), as "it has been shown that H3 receptors form heterodimers with both D1 and D2 receptors" (Ellenbroek, 2013). There is also evidence showing that dopamine activity is both influenced by sensory signals and influences sensory processing (Valdés-Baizabal, Carbajal, Pérez-González, & Malmierca, 2020; Chiodo, Antelman, Caggiula, & Lineberry, 1980; Ungerstedt & Liungberg, 1974; Jacob, Ott, & Nieder, 2013; Reinig, Driever, & Arrenberg, 2017; Toro et al., 2015; Ketzef et al., 2017), particularly thalamic dopamine (Oke & Adams, 1987; Lee, Thwaites, Gogos, & van den Buuse, 2020; Takahashi, Higuchi, & Suhara, 2006). Dopamine therefore impacts on sensory processing, which in turn informs motor output (van de Kamp et al., 2013; Brooks & Cullen, 2019) and mental states (Andersson, Sutton, Bejerholm, & Argentzell, 2021; van den Boogert et al., 2022).

On the other hand, mental states impact on immune function, as psychological stress triggers the release of corticotropin-releasing hormone (CRH), itself leading to mast cell degranulation and associated histamine release (Bhuiyan et al., 2021; Kempuraj et al., 2017), illustrating the bidirectional relationship between mental health and the immune system (brain-body and body-brain).

While more research is warranted on the possible relationship between sensory processing and thalamic glutamate and gamma aminobutyric acid (GABA), these appear to impact on sensory processing, as highlighted in Wood et al.’s study (2021): “SOR [sensory over-responsiveness] severity correlated negatively with thalamic GABA and positively with somatosensory glutamate.”

**Alexithymia**

Alexithymia is associated with interoception and refers to difficulty in identifying, differentiating, and expressing one’s own feelings and emotional states. Research has highlighted an association between alexithymia and neurodivergence, particularly in autism and ADHD (Donfrancesco et al., 2013; Edel et al., 2010; Williams & Gotham, 2021b). This can make it difficult for neurodivergent individuals to express or explain emotional or psychological distress, including that underlying eating disorders.

There is evidence showing that alexithymia influences eating behaviours such as emotional eating (Pinna, Sanna, & Carpiniello, 2015; Westwood, Kerr-Gaffney, Stahl, & Tchanturia, 2017; Cochrane, Brewerton, Wilson, & Hodges, 1993), and should therefore be taken into consideration given its influence on treatment outcomes (Gramaglia, Gambaro, & Zeppenf., 2020).
Alexithymia is linked to self-harming behaviours (i.e., non-suicidal self-injury (NSSI)) (Norman & Borrill, 2015; Iskric et al., 2020). Autistic individuals (Blanchard et al., 2021; Cassidy et al., 2020), ADHDers (Allely, 2014; O’Grady & Hinshaw, 2021; Garas & Balazs, 2020; Hinshaw, Littman, & Chronis-Tuscano, 2022), and individuals with eating disorders (Sansone & Levitt, 2002) are at an increased risk of self-harm.

Self-harm and trauma-informed care

Self-harm is more prevalent in eating disorder populations than other psychiatric populations or healthy controls (Sohn et al., 2023) and is positively correlated with attempted suicide (Cucchi et al., 2016). Self-harm is a highly stigmatised phenomenon commonly misunderstood as intentional attention seeking, bad or challenging behaviour, and/or as an act of manipulation (Burke et al., 2019). This stigmatising framing of self-harm adversely impacts on access to necessary psychological support for those experiencing such distress. For example, dialectical behaviour therapy (DBT) promotes punitive operant conditioning techniques (contingency management) such as the ‘24h no contact rule’ and ‘withdrawal of warmth’ (Linehan, 1993, p. 307; Behavioral Tech, 2016) which are aversive strategies identical to ‘planned ignoring’ used in applied behaviour analysis (ABA) (Glass & Mayes, 2012). Contingency management techniques such as ‘withdrawal of warmth’ are “...one of the four primary change procedures in DBT” (Carmel et al., 2016) and have been suggested as a possible treatment modality to address self-harm in eating disorder patients (Perkins, Ortiz, & Smith, 2020). The authors argue that intentionally withdrawing warmth towards or ignoring someone experiencing extreme distress as an aversive or punitive measure with the intent to incentivise the individual to suppress their distress in the future is not trauma-informed (see Delahouke, 2015; Hoppypelican, 2022; Just 1 Voice, 2021; Donaldson, 2022; Donaldson, 2021). As highlighted by Ram in their critique of such behavioural practices (2020): “we should have extreme trepidation about extinction and planned ignoring programs being run that have the effect of making the person feel that accessing love, comfort, reassurance, and affection in their lives is conditional to their behavior.”

Interventions which aim for behavioural compliance through operant conditioning techniques (e.g., ABA, contingency management techniques as seen in DBT) are fundamentally not trauma-informed (Millman, 2019; Hoppypelican, 2022; Donaldson, 2022; Donaldson, 2021; de la Mare, 2023) nor neurodiversity-affirming, and can be trauma-inducing, especially for neurodivergent individuals (Autistic Self-Advocates Against ABA, n.d.; Autistic Strategies Network, 2019; Sandoval-Norton, Shkedy, & Shkedy, 2019; Kuperstein, 2018; Kohn, 2020; Anderson, 2022; Kerns et al., 2022; South, Costa, & McMorris, 2021; Heidel, 2020). As was highlighted by Sterman et al. (2022): “ABA and behavioral techniques from the field of ABA are emerging to be recognized as ineffective at best and abusive at worst (Sandoval-Norton & Shkedy, 2019), increasing incidence of post-traumatic stress disorder in people with previous ABA treatment (Kuperstein, 2018).”

Intuitive eating

Applied rigidly, intuitive eating is ableist as it presumes an individual has adequate interoceptive awareness and multisensory integration to respond to interoceptive cues, presumes typical executive functioning capacity, and pathologises emotional eating (Collings, 2022). These presumed baseline capabilities are likely to not align with the neurodivergent experience with many neurodivergent people experiencing interoceptive confusion (Fiene, Ireland, & Brownlow, 2018; Kutschkeid et al., 2019), as well as executive functioning (Barkley, 1997; Kouklari et al., 2018) and emotional regulation (van Stralen, 2016; Conner et al., 2022) differences, all of which have been identified as contributing to eating disorder risk (Jenkinson, Taylor, & Laws, 2018; Riva & Dakanalis, 2018; Shields et al., 2022).

If interoceptive confusion is present, therapy approaches based on intuitive eating may require extensive adaptation or may not be appropriate at all (Collings, 2022). The use of other individualised strategies, such as setting alarms to remind someone to eat; using body-doubling
with a friend, colleague, or family member to support intake; or changing the size and schedule of meals to accommodate individual satiation experiences, are more affirming options to explore (Cobbaert, 2022; Collings, 2022).

**Physical eating environment**

Neurodivergent individuals’ preferences for their eating environment will vary, underscoring the need for clinicians and others involved in eating disorder care to include an assessment of foodscape preferences with their neurodivergent clients and support reasonable accommodations where possible. Accommodations such as providing a quiet eating environment, dimmable lighting, and preferred music or distractions (e.g., sensory toys, iPad) are likely to be helpful and facilitate ease of engagement in mealtimes. Some of these accommodations are not currently perceived as being helpful or appropriate as they are not aligned with neuronormative feeding expectations. For example, social eating (McMaster et al., 2021; Jeffrey, 2021) and mindful eating (Warren et al., 2017) are common neuronormative feeding goals that are included as part of feeding and eating disorder treatment but may be difficult expectations to meet for a neurodivergent individual.

**Social eating versus eating alone**

Research suggests that many autistic people prefer to eat alone as social interactions may contribute to the experience of overwhelm and interfere with adaptive eating behaviours (Park-Cardoso & Soares da Silva, 2021). Eating alone enables autistic individuals to implement adaptations and accommodations such as eating without feeling the pressure to engage in conversation, being autonomous in choice of eating venue and therefore able to choose one that meets individual sensory needs and food preferences, using headphones without appearing rude or antisocial, eating in venues at times of the day that are less busy, and feeling able to leave the table at any point in time without upsetting a dining partner. Rather than the observed preference to eat alone being driven only by a reluctance to be social, participants felt like it was simpler as it was likely that their preferred neurodivergent adjustments would not be accepted by their dining companions and therefore, it was simply easier to eat alone.

**Food preferences and variety**

As identified above, risk of sensory-related trauma (which may involve feeding) and anxiety in the neurodivergent population is heightened (Kerns et al., 2022; Heidel, 2022; Verhulst, MacLennan, Haffey, & Tavassoli, 2022; Jamal et al., 2021).

Neuronormative feeding and eating expectations emphasise the importance of eating a wide variety of foods from all food groups. This messaging is evident across the spectrum of nutrition advice, for example, from public health nutrition advice such as the Australian Dietary Guidelines (NHMRC, 2013) through to specific feeding and eating disorder interventions and recovery frameworks such as the RAVES model (Jeffrey, 2021).

Certainly, where a wide variety of foods are tolerated and/or enjoyed, aiming for adequate dietary variety is an appropriate goal to support eating a well-balanced diet. However, that may not be realistically achievable for some neurodivergent individuals without causing sensory-related food trauma. Indeed, autistic adults have reported food-related trauma as the result of being forced as children to eat foods that they found aversive (Kerns et al., 2022; Fulton, Reardon, Richardson, & Jones, 2020).

This potential to cause harm supports the argument that there is no justification for forcing or coercing a neurodivergent person to eat food items that are not safe for them from a sensory perspective (e.g., smell, taste, texture, colour) in the absence of clear medical necessity. Nutritional safety can usually be assured with careful dietary assessment and planning, including the use of
supplements as indicated, even when dietary variety is constrained. An APD is well-placed to provide this clinical nutrition support.

Parents and caregivers, or anyone who is involved in preparing food for a neurodivergent person, will benefit from understanding neurodivergent people's unique sensory profiles so that food-related sensory needs can be understood, respected, and accommodated wherever possible.

**Oro-motor difficulties**

Oro-motor difficulties (e.g., dysphagia) can contribute to feeding difficulties and eating disorders and can have a variety of causes, including dyspraxia or apraxia. Psychotropic medications can also impact on someone's ability to swallow (Massa et al., 2022). If oro-motor difficulties are suspected, a speech pathologist, occupational therapist, and/or clinical neuropsychologist can provide guidance on the food, fluid, and medicine accommodations needed.

**Samefoods and food jagging**

'Samefoods' is a concept that is associated with positive autistic eating experiences. Samefoods is a way of identifying a set of food items which an autistic person eats repetitively for prolonged periods of time, contributing to predictability and a sense of safety (Park-Cardoso & Soares da Silva, 2022).

In paediatric feeding spaces, this phenomenon may be referred to as 'food jagging'. Samefoods, or food jagging, are understood as an important, functional, self-regulation adaptation for neurodivergent people. Whilst the loss of one or more samefoods from an individual's preferred food repertoire, especially when food variety is already limited, can further increase nutritional risk, it is also important to avoid inherently pathologising samefoods or food jagging behaviours. With the awareness that samefoods will change from time to time, it can be helpful to plan, or in some way consider, how samefoods can be replaced with a new samefood of similar nutritional value.

**Insistence on sameness**

Park-Cardoso and Soares da Silva (2022) provide valuable insight into the highly adaptive, but traditionally pathologised, autistic ‘insistence on sameness’ in relation to food space in their qualitative research involving autistic adults. Insistence on sameness includes efforts to reduce uncertainty, uncontrollability, and exposure to adverse stimuli and social interaction. Rather than being maladaptive, they are an adaptive response that autistic individuals use to optimise their wellbeing, quality of life, and interaction with the environment (Park-Cardoso & Soares da Silva, 2022).

In Park-Cardoso and Soares da Silva’s study (2022), prior to their autism diagnosis, participants recalled perceiving their feeding-related insistence on sameness as weird habits to be suppressed (i.e., self-discrimination, internalised ableism) which often led to anxiety, overwhelm, and meltdowns. When participants reframed their insistence on sameness through the lens of a positive autistic identity, it was reconceptualised and accepted as an authentically autistic adaptation that enabled them to exercise their human rights to exist and engage with eating in a way that meets their needs as opposed to those of neurotypical people (Park-Cardoso & Soares da Silva, 2022).
Research considerations:

- Empirical research that takes an affirming lens, underpinned by epistemic and cultural humility, is necessary to further examine neurodivergent features as they relate to feeding and eating.

Practice and service considerations:

**Exteroception:**

- Accommodate exteroceptive preferences with regards to the physical eating environment when possible as this supports a reduction in overall anxiety (e.g., dim lighting, quiet space or noise cancelling headphones, appropriate use of distractions during mealtimes).
- Accommodate exteroceptive preferences with regards to food items when possible as this reduces the risks of food-related trauma.

**Interoception:**

- Work with neurodivergent individuals to identify how their interoceptive awareness interacts with their feeding.
- Adapt treatment goals and strategies based on individual assessment of interoceptive awareness (ISQ or MAIA).
- Strategies may include using reminders and prompts to encourage regular eating or adjusting meal and snack schedules/sizes to allow for different satiation experiences (Gobbaert, 2022).
- Respect autonomy, promote self-efficacy, and encourage flexibility.

**Proprioception:**

- Due to atypical proprioception, neurodivergent individuals may prefer to move or position their bodies differently to neurotypical people when eating (e.g., eating while standing or walking, eating while laying down).
- Allow neurodivergent people to position themselves in accordance with what is comfortable for them to facilitate a positive eating experience.
- Samefoods/food fagging are functional adaptations that are not inherently pathological and can serve a stabilising and self-soothing role in the eating experience.
- Supporting non-distressing, pressure-free, autonomous novel food exposures that are informed by an understanding of the individual’s usual food preferences in an adapted sensory environment is one support that provides opportunity for the acquisition of a new samefood if necessary.
- If nutritional deficiencies become an issue, dietary assessment and supplementation may be indicated as a strategy following advice from an Accredited Practicing Dietitian (APD).
- Affirming psychoeducation can validate autistic individuals’ experience of insistence on sameness.

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**Cognition, communication, and psychosocial factors**

**Overview**

Neurodivergent individuals have different ways of thinking, communicating, and socialising. These differences are often framed through the lens of pathology, rather than being accepted, embraced, and accommodated. Here, we describe how these differences, and the discrimination that often accompanies them, impact on neurodivergent people’s wellbeing and sense of self. We also delineate how these differences may influence eating disorder presentations.
Neurodivergence and eating disorders: Different factors

The aetiology and maintaining factors of eating disorders are complex and remain insufficiently understood (American Psychiatric Association, 2022). Nevertheless, a range of general theoretical models have been developed to conceptualise disordered eating and eating disorders. However, these models, founded on observation of cognitive-behavioural features, as opposed to phenomenological perspectives, are less useful when they are applied to populations who are characterised by divergent cognitive, perceptual, and subjective experiences (see Longhurst & Clark, 2022; Park-Cardoso & Soares da Silva, 2022; Park-Cardoso & Soares da Silva, 2021; Testa et al., 2020).

Neurodivergence is associated with heterogeneous differences in sensory processing, cognitive processes, executive function, social communication, and fine motor skills that may also impact feeding and eating. As such, it is not surprising that lived experience insight and emergent research suggest that the factors implicated in the eating disorder aetiology and pathophysiology in neurodivergent individuals is often different to those identified for neurotypical people (see Rowello, 2022; Elwyn, 2023; Adamson et al., 2020; Brede et al., 2020; Kelly & Kelly, 2021; Longhurst & Clark, 2022; South, Costa, & McMorris, 2021; Curtin, Pagoto, & Mick, 2013; Testa et al., 2020).

Such insight highlights the importance of epistemic humility in our approach to the intersection of neurodivergence and eating disorders, acknowledging that our understanding of eating disorders in neurodivergent people is incomplete and that a deep exploration of phenomenology is indicated to progress prevention and treatment interventions.

Speaking and situational mutism

Non-speaking autistic people are oftentimes able to express themselves using other means of communication such as AACs (Augmentative and Alternative Communication systems) (Ganz, 2015) and/or sign language. Speaking represents only one way in which people can communicate. Whilst some autistic people are non-speaking all or most of the time (see Reframing Autism, 2022), others are partially speaking. Partial speaking is often resulting from situational mutism (LiterallyAusome, n.d.), which is when someone can speak in certain contexts but not in others. Factors such as anxiety, demand avoidance, psychological trauma, and sensory overwhelm can contribute to situational mutism. Communication is a key aspect of interpersonal relationships, connection, and self-advocacy. All of which have implications for psychological wellbeing and a positive sense of self. Therefore, equitable supports must accommodate individual communication needs (e.g., writing on paper, via email or text, using AACs, speaking, or a combination of those as needed on a contextual basis).

Cognitive and social communication differences

Neurodivergence, by definition, reflects a mind characterised by a divergent neurocognitive style (Walker, 2021). Autism (Stark et al., 2021) and ADHD (Rubia, 2018; Mohamed et al., 2021) have been found to be associated with several cognitive differences. Autism has been associated with cognitive differences including “attenuated predictive processing and intolerance of uncertainty” (for detailed review see: Stark et al., 2021, p. 571). These cognitive differences have been proposed to potentially influence diverse phenomena associated with autism including anxiety (including anxiety in social contexts), motivational salience, executive function, self-stimulatory behaviours (stimming), insistence on sameness, and autistic inertia (Stark et al., 2021). ADHD is associated with differences in basic cognitive processes including processing speed and distractibility, which subsequently drive differences in more complex cognitive processes such as working memory and planning (Mohamed et al., 2021).
Literal thinking can influence eating-related behaviours, reflected through the way in which diet culture and health messaging may be interpreted and translated as dietary rules that are difficult to disengage from (e.g., healthy versus unhealthy foods). Therefore, food morality (see Byrne, 2022) can have a detrimental impact on autistic people’s eating behaviours (e.g., orthorexia nervosa).

Furthermore, interoceptive confusion has been associated with body mistrust (Brown, 2020), which may increase someone’s vulnerability towards internalising societal messages around gendered body ideals such as thinness for women and muscularity for men. Indeed, when lack of trust in one’s own bodily signals arises, the individual may become more reliant and dependent on external sources for feedback and self-appraisal, therefore increasing their risk of internalising harmful body ideals.

Researchers, clinicians, and other stakeholders engaging with neurodivergent individuals with feeding difficulties and eating disorders will benefit from an awareness of these cognitive differences. Exploration of these cognitive differences in the context of an individual’s lived experience is likely to support the formulation of more affirming eating disorder care and reduce unintentional harm.

**Giftedness**

Giftedness is usually a trait attributed to masculinity, which illustrates misogynistic attitudes characteristic of Western patriarchy in relation to academic and/or creative potential (Reilly, 2022; Jacobs, 2019; Ryan, 1999; Noble, 1987). Discriminatory and exclusionary beliefs associated with giftedness also extend to cultural, ethnic, and racial minorities, reflecting Western tropes of white supremacy (Barnes, 2022; Croizet, 2012; Belkhir, 1994; Helms, 2012).

Gifted AFAB individuals are shown to be disproportionately affected by imposter syndrome, perfectionism, and low self-esteem (Lea-Wood & Clunies-Ross, 1995; Ryan, 1999; McCormick & Wolf, 1993; Luscomb & Riley, 2001), which may stem, in part, from gender biases and discrimination in relation to academic and/or creative potential (Reilly, 2022; Clance & Imes, 1978). Perfectionism in the context of giftedness has been associated with the concept of overexcitabilities, discussed earlier (Mofield & Peters, 2015).

Low self-esteem, perfectionism (NEDC, n.d.), and anxiety (BeyondBlue, n.d.), are known to be contributing factors in the development of eating disorders. Given that these factors all play a role in the development of eating disorders, it would be fair to assume that they may account, at least partially, for gifted AFAB individuals being at an increased risk of developing body image disturbances and eating disorders (see Krafchek & Kronborg, 2020; Beisser & Gillespie, 2021; Leroux & Cuffaro, 2001; Alison, 2004).

It is also worth noting that sensory processing plays a role in many cognitive processes, including creativity (Zabelina et al., 2015), learning, and memory (Wolff & Vann, 2019; Wolff et al., 2021). Therefore, similarly to other forms of neurodivergence, giftedness is linked to atypical sensory processing (Deary, 1994; Rinn, Mullet, & Nyikos, 2018; Duncan, Goodwin, Haase, & Wilson, n.d.; Blackett & Webb, 2011; Winkler & Voight, 2016). Indeed, “gifted children often display sensitivities to their environment that vary from those of the general population” (Gere, Capps, Mitchell, & Grubbs, 2009).

**Masking**

Masking refers to the conscious or subconscious camouflaging of autistic (or otherwise neurodivergent) traits in such a way that an individual appears less visibly autistic (or neurodivergent). This leads to a mismatch between the outward, social presentation of an individual and their inner experience (McQuaid, Lee & Wallace, 2022; Horner, 2023). Masking has been documented in ADHDers and autistic people and contributes to a wide array of negative mental
health consequences (e.g., low self-esteem, depression, anxiety, burnout, suicidality) (Radulski, 2023; Cassidy et al., 2020; Stanborough, 2021; Bradley, Shaw, Baron-Cohen, & Cassidy, 2021). Masking has been shown to also affect one’s sense of self and identity in a negative way (Cuncic, 2022; Miller, Rees, & Pearson, 2021; Hull et al., 2021; Stanborough, 2021).

Sense of self and identity are important aspects underlying eating disorders (Williams, King, & Fox, 2016), suggesting a pathway by which masking may be associated with increased risk of developing eating disorders amongst neurodivergent people. For example, some neurodivergent people affected by eating disorders have reported that they believe a combination of minority stress, masking, and diet culture has contributed to the development of their eating disorder (i.e., using food restriction and weight loss techniques in an attempt to better fit in and avoid being discriminated against) (Zadow, 2022).

**Rejection sensitivity dysphoria**

Rejection sensitive dysphoria describes the experience of an intense emotional and visceral reaction that arises in response to a rejection (real or perceived) combined with increased sensitivity to criticism.

Rejection sensitivity is often heightened in neurodivergent individuals (April, 2021; Dodson, 2022), contributed to by minority stress and systemic oppression (Service, 2021). As such, rejection sensitivity dysphoria in the context of neurodivergence can be understood as a response to pervasive trauma mediated by systemic oppression.

In addition, appearance-based rejection sensitivity (anxiously expect, and react with intensity to, indicators of appearance-based rejection) has been found to mediate the relationship between social anxiety and disordered eating behaviours (binge eating, restraint, over-evaluation of weight and shape, compulsive exercising) (Linardon et al., 2017).

**Double empathy problem**

Interpersonal relationships depend on a mutual understanding of shared intrinsic values, worldviews, and culturally situated social predispositions (Milton, 2012). When individuals with significantly different ways of making sense of themselves and the world around them communicate, a relational disjunction may occur. The concept of the double empathy problem describes how this breakdown in mutual understanding is not necessarily the exclusive fault of one person or the other, and as such, it remains an issue for both vested parties to resolve together. However, in our neuronormative society, such communication breakdowns are often framed as one party being at fault (social communication ‘deficit’) and needing to ‘improve’ and conform to dominant societal norms rather than both parties working to embrace diversity and promote mutual acceptance (Milton, 2012; Milton, Gurbuz, & López, 2022; Gernsbacher & Yergeau, 2019; Crompton et al., 2020; Crompton et al., 2021; Milton, Waldock, & Keates, 2023; Jellett & Flower, 2023).

Further support for the double empathy problem comes from research showing that autistic people communicate efficiently with other autistic people, whilst non-autistic people tend to communicate well with other non-autistic people (Chen, Senande, Thorsen, & Patten, 2021; Crompton et al., 2020). Breakdowns in mutual understanding often arise as a result of people’s different perceptual dispositions and socio-cultural contexts, not because one group (in this case, autistic people) is inherently impaired or deficient (Murray, Milton, Green, & Bervoets, 2022; Umucu et al., 2022; Nicolaidis et al., 2019).

Many behavioural practices, such as social skills training in ABA or interpersonal effectiveness skills training in DBT, promote the ableist idea that some people need to be taught the ‘correct’ (neuronormative) ways of socialising and communicating (see Linehan, 1993; Lenz et al., 2016; Bohlander, Orlich, & Varley, 2012). This idea is antithetical to the neurodiversity paradigm and
ignores the core premises of the double empathy problem (Therapist Neurodiversity Collective, n.d.). Such social skills training frameworks have been shown to promote masking, which contributes to poor mental health and self-stigma in neurodivergent people, including suicidality (Pearson & Rose, 2021; Stanborough, 2021; Miller, Rees, & Pearson, 2021; Han et al., 2023). This was discussed in South, Costa, and McMorris (2021):

“Quantitative and qualitative research studies show that such camouflaging is exhausting and is associated with poor mental health, including suicidal thoughts and behavior. This has important implications for many interventions, including social skills training and behavioral therapies that aim to normalize appearance and behavior at the risk of exacerbating a disconnect between the true self and performing self, potentially increasing anxiety and decreasing self-esteem.”

Given the mental health ramifications associated with systemic oppression and masking (Pearson & Rose, 2021), priority should be given to increasing general awareness about the double empathy problem (Crompton, DeBrabander, Heasman, Milton, & Sasson, 2021) and minority stress (Botha & Frost, 2018), with a view to increased acceptance and respect for neurodivergent people’s ways of being and existing.

**Cultural safety**

Culture may influence understanding and conceptualisation of neurodivergence and eating disorders. Cultural engagement and representation are required to inform culturally safe interventions.

Indeed, there is evidence showing that Aboriginal and Torres Strait Islander people (Bailey & Arciuli, 2020), Indigenous Canadians (Rutherford, 2022), and Māori people (Tupou, Curtis, & Waddington, 2021) conceptualise autism differently to people from Western cultures. Eating disorders may also be understood differently among Aboriginal and Torres Strait Islander people (Burt, Mitchison, Doyle, & Hay, 2020)

The promotion of epistemic and cultural humility are priorities for improving eating disorder interventions supporting neurodivergent racial, ethnic, and/or cultural minority groups. This requires acknowledgement of differences, efforts to improve understanding of the differences, and holding deep respect for these differences in ways of knowing. This process will likely demand that we reframe traditional Western hegemonic diagnostic constructs in order to better meet the needs of neurodivergent individuals who identify as belonging to racial, ethnic, and/or cultural minority groups. Authentic co-production of research, support systems, and treatments is essential.

**Stimming**

Stimming (self-stimulatory behaviours) such as hand flapping, clapping, rocking, repeating words and/or sounds (echolalia or palilalia), and fidgeting are very important communicative, self-regulating, and self-soothing mechanisms for neurodivergent people (Kapp et al., 2019; Nolan & McBride, 2015; Charlton, Entecott, Belova, & Nwaordu, 2021).

Stims have traditionally been targeted for suppression or reduction through behavioural interventions such as ABA, although such practices are not neurodiversity-affirming (Therapist Neurodiversity Collective, 2022; Lynch, 2019) and have been suggested to represent a violation of human rights (e.g., bodily autonomy) (Ne’eman, 2010). As such, it is important for researchers, clinicians, and other stakeholders who interact with and support neurodivergent individuals, to advocate for their right to engage in non-injurious stimming behaviours in all settings without judgment.
Executive function differences

Executive functions are meta-cognitive processes involved in the regulation of higher order cognitive processes (Demetriou, DeMayo, & Guastella, 2019; Ward, 2019). Many different executive functions have been identified and can be categorised according to whether they are cold (purely cognitive) or hot (reward- or affect-related) (Ward, 2019). Cold executive function domains include working memory, response inhibition, set shifting, attentional control, cognitive flexibility, multi-tasking, problem solving, error detection, and performance monitoring and fluency (Demetriou et al., 2019; Salehinejad, Ghanavati, Rashid, & Nitsche, 2021). Hot executive functions include emotion regulation, reward processing, delay discounting, risky decision making, affective decisions, self-referential, social cognition, and any cold executive function domain with emotional or affective features (Salehinejad et al., 2021).

Differences in executive function have been identified in autism (Demetriou, DeMayo, & Guastella, 2019), ADHD (Antshel & Russo, 2019; Silverstein et al., 2020), dyslexia (Reiter, Tucha, & Lange, 2005; Brosnan et al., 2002; Helland & Asbjørnsen, 2000; Lonergan et al., 2019), and dyspraxia (Bernardi et al., 2018; Lachambre et al., 2021). The executive function differences observed in autism differ from those observed in ADHD (Salehinejad et al., 2021). Autism has been found to involve differences in both hot and cold executive function domains, with some research suggesting that differences in hot executive functions are dominant (Zimmerman, Ownsworth, O'Donovan, Roberts, & Gullo, 2016). ADHD is most often associated with differences in cold executive functions, although some research does highlight a degree of involvement of some hot executive functions (Nejati, Sarraj Khorrami, & Nitsche, 2021).

Examples of some of the many ways in which executive function differences may influence feeding and eating include:

- Difficulty planning (e.g., grocery shopping) and preparing regular meals and snacks,
- Lower levels of delay discounting (preference for immediate rewards over larger, delayed rewards) may support dietary restriction whereas higher levels of delay discounting may support higher levels of emotional and/or impulsive eating (Steward et al., 2017),
- Atypical executive functioning and weaker working memory may increase disinhibited eating (Shields et al., 2022),
- Reduced set shifting abilities may give rise to dietary restriction (Steegers et al., 2021).

The BRIEF-A (Roth, Isquith, & Gioia, 2005) is an executive function assessment tool that can be used to inform the design and adaptation of therapy goals, pace, and strategies to align with the executive function profile of the neurodivergent individual. Awareness of an individual’s executive function differences and capacity can inform the design of interventions, identify necessary accommodations, and are likely to support improved engagement with treatment.

When executive function differences are contributing to difficulties in treatment but remain unidentified, there is a risk that the person’s difficulties will be misinterpreted as laziness, defiance, manipulation, non-compliance, or resistance, which are invalidating and unhelpful in addressing eating and feeding concerns.

Perfectionism

As previously discussed, neurodivergent people live in a society that is not oriented to their needs and in which they are routinely discriminated against. This may lead to experiences that contribute to low self-esteem and internalised shame, which are likely contributing factors to the high prevalence of perfectionism in this population (see Ellison et al., 2022; Strohmeier, Rosenfield, DiTomasso, & Ramsay, 2016; Fugate & Gentry, 2016; Stoeber & Roundtree, 2020). In addition, perfectionism is linked to sensory processing, particularly interoception (Costa-Lopez et al., 2021; Martini, Marzola, Brustolin, & Abbate-Daga, 2021; Marsero et al., 2011; Pink et al., 2021).
Perfectionism and internalised shame have been shown to represent risk factors for developing eating disorders (Howard, Williams, Woodward, & Fox, 2022; Bardone-Cone et al., 2007; Brown, Parman, Rudat, & Craighead, 2012). Therefore, in this context, it is important to consider that perfectionism can be understood as a trauma response or survival mechanism to hegemonic normalcy and associated systemic oppression (Chen, Hewitt, & Flett, 2019; Woodfin, Hjeltnes, & Binder, 2021) as well as potentially being related to physiological variations in sensory processing that are separate to a personality construct.

The Perfectionism Inventory (Hill et al., 2004) and the Clinical Perfectionism Questionnaire (Egan et al., 2016) are useful validated self-report inventories for adults to identify perfectionism.

**Demand avoidance**

Demand avoidance is a natural human trait that describes efforts directed towards avoiding, and the actual avoidance of, tasks or activities, whether they are for ourselves or others (PDA Society, n.d.). Extreme demand avoidance is most often associated with autism and reflects a preference to avoid or disengage from certain tasks or activities that create sensory overwhelm or discomfort, require transitioning away from engaging in a special interest, are not intrinsically rewarding or interesting, or that create dysregulation by interrupting a preferred routine (PDA Society, n.d.).

High levels of demand avoidance are also described as a feature of a controversial neurocognitive profile termed ‘Pathological Demand Avoidance’ (PDA). PDA is proposed as a subtype of autism (Kildahl et al., 2021; PDA Society, n.d.), although some have argued it can also be found in other forms of neurodivergence (Woods, 2019). An alternative and more affirming name has been proposed by Emily Wilding, a neurodivergent educator, as ‘Pervasive Drive for Autonomy’ (Wilding, 2020). Wilding’s rationale is that individuals experiencing extreme demand avoidance, colloquially identified as PDAers within the neurodivergent community, describe an intense and overwhelming need for self-determination and autonomy in their decisions and a resistance to anything that risks constraining their personal freedom or intrinsic values (Wilding, 2020; Reframing Autism, 2021).

Demand avoidance may manifest in a variety of ways and the presentation can be variable based on individual and contextual factors. An externalised presentation describes resistance to demands as being more overt and physical compared with an internalised presentation, whereby resistance is quieter, the anxiety driven by the demand is turned inwards and associated difficulties masked or hidden (PDA Society, n.d.).

Although not a formally validated instrument, the PDA Society recently published ‘Identifying and assessing a PDA profile – Practice guidance’ to support clinicians in identifying PDAers (2022). A PDA assessment is usually undertaken as part of an autism or more general neurodevelopmental assessment where there is significant demand avoidance. It is also suggested to be useful for other individuals who clinicians, educators, parents, or other professionals identify as having behaviours associated with extreme demand avoidance (PDA Society, 2022).

In relation to eating, demand avoidance is an important factor to consider when working with neurodivergent individuals. For example, a direct demand could be a request to eat a meal or snack or being told to eat a certain amount and/or type of food. Indirect or internal demands may include things like: the time required to meet the demand of eating; the transition from one task to the task of eating; being asked direct questions about food, eating, or internal states; being asked to make a decision about what food to eat off a menu; perceiving one’s own hunger and thirst; receiving praise for eating something (praise implicitly conveys an expectation that action can, and will, be repeated in the future); and the implicit demand to engage socially in an eating experience. All of these demands are potential triggers for demand avoidance and associated anxiety.
Identification of the presence of marked demand avoidance is essential to guide therapeutic engagement as traditional compliance-based approaches are likely to drive a significant escalation in anxiety and demand avoidance for the neurodivergent patient. In addition, interventions that include rewards or incentives are likely to be ineffective and may prove counterproductive. For example, both community and inpatient treatment modalities require the individual to engage in treatment activities such as attending appointments, group-based sessions, and complete activities or challenges. The demands of treatment may be overwhelming for a PDAer patient, leading to missed appointments, not completing treatment tasks or homework, exhibiting behaviours that appear obstructive, or even overall disengagement. In the inpatient setting, it is likely that patients will be highly stressed and overwhelmed, possibly increasing the likelihood of engaging in extreme demand avoidance, self-harming behaviours, and even increasing the risk of being sectioned and/or restrained (PDA Society, 2022).

Alternate approaches that may be helpful in engaging someone who experiences extreme demand avoidance in treatment or associated supports are identified as those which reduce the perception of demands, allow a degree of control and autonomy, and can be individualised and applied flexibly to accommodate fluctuating anxiety levels (PDA Society, 2022). Other strategies to consider include using indirect and depersonalised language to reduce the anxiety response associated with receiving a direction or order, reducing sensory overwhelm, allowing adequate time for communication and information processing, and reducing non-urgent demands in all areas of life (PDA Society, 2022).

The Extreme Demand Avoidance Questionnaire Adult (EDA-QA) is a self-report inventory that helps assess demand avoidance in adults and may be useful to inform eating disorder treatment adaptations needed for some neurodivergent individuals (Egan, Linenberg, & O’Nions, 2019).

**Useful validated self-report inventories**

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<td><strong>Exteroception:</strong></td>
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<td>• Glasgow Sensory Questionnaire (GSQ)</td>
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<td>• Sensory Perception Quotient (SPQ)</td>
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<td>• Interoception Sensory Questionnaire (ISQ)</td>
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<td>• Multidimensional Assessment of Interoceptive Awareness (MAIA)</td>
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<td>• Three-domain interoceptive sensations questionnaire (THISQ)</td>
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<td>• Perth Alexithymia Questionnaire (PAQ)</td>
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<td>• Bermond–Vorst Alexithymia Questionnaire (BVAQ)</td>
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<td><strong>Masking (camouflaging):</strong></td>
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<td>• Camouflaging Autistic Traits Questionnaire (CAT-Q)</td>
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<td>• Perfectionism Inventory (PI)</td>
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<td>• Clinical Perfectionism Questionnaire (CPQ)</td>
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<td><strong>Demand avoidance (PDA):</strong></td>
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<td>• Extreme Demand Avoidance Questionnaire Adult (EDA-QA)</td>
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Neurodivergence: Health and psychosocial considerations

Overview

Neurodivergent individuals experience a variety of health conditions at higher rates compared to neurotypical people. Given that such health conditions may affect eating and feeding, it is important for eating disorder stakeholders to be aware of such interactions.

In addition, neurodivergent individuals are disproportionately impacted by mental health concerns and illnesses, such as anxiety, depression, self-harm, and post-traumatic stress disorder (PTSD). These mental health concerns and illnesses are oftentimes underlying factors in the development of eating disorders, hence their relevance in this context.

This subsection therefore elaborates on the various health and mental health conditions faced by many neurodivergent individuals, and how these may impact on body image and eating.

Chronic health- and immune-related conditions

Neurodivergent people experience high rates of co-occurring health concerns and chronic ill-health (Karpinski, Kolb, Tetreault, & Borowski, 2018; Arnold, Higgins, & Trollor, 2020; Chown et al., 2023;
Neurodivergent people often experience sleeping difficulties such as insomnia and parasomnia (Singh & Zimmerman, 2015, Guller & Yaylaci, 2022; Galli et al., 2022; Wajszilber, Santiseban, & Gruber, 2018; Neurodivergent Insights, n.d.). Up to 50% of ADHDers (Hvolby, 2015; Wajszilber, Santiseban, & Gruber, 2018) and up to 80% of autistic people (Mazurek, Dovgan, Neumeyer, & Hvolby, 2015) and up to 50% of ADHDers (Hvolby, 2015; Wajszilber, Santiseban, & Gruber, 2018) and up to 80% of autistic people (Mazurek, Dovgan, Neumeyer, & Hvolby, 2015) experience mental health concerns and illnesses such as depression, psychosis, self-harm, mania or hypomania, and anxiety (Regé & Hodgkinson, 2013; Rosenblat, 2019; Hughes & Ashwood, 2020; Ermakov, Melamud, Buneva, & Ivanova, 2022; Müllér & Schwarz, 2010; Dye, Lenz, & Leuner, 2022; Lee & Giuliani, 2019; Afrin et al., 2015; Nautiyal, Ribeiro, Pfaff, & Silver, 2008; Kempuraj et al., 2017; Nishino, Sakai, Nishino, & Ono, 2022; Brydges & Reddaway, 2020; Lucerne & Kiraly, 2021; de Timary, Stärkel, Delzenne, & Leclercq, 2017; Dantzer et al., 2008; Steiner et al., 2011). On the other hand, psychological stress influences immune function (Vasile, 2020; Theoharides, 2020; Kempuraj et al., 2017; Cao et al., 2005). More specifically, the immune system has been implicated in the pathophysiology of eating disorders (Hedman et al., 2018; Marcos, 1997; Corcos et al., 2003; Gibson & Mehler, 2019; Raevuori et al., 2014). For example, prostaglandins (released by mast cells) are shown to play a role in PCOS (Zhai et al., 2020; Ye et al., 2020), while PCOS is a known risk factor for developing eating disorders (Tay et al., 2019; Lee et al., 2019; Pirotta et al., 2019).

Psychological concerns and conditions

In addition to being overrepresented in eating disorder populations, neurodivergent people also experience disproportionately high rates of other mental health concerns and illnesses. Indeed, up to 70% of autistic people experience mental ill-health (Mandy, 2022, Commonwealth of Australia, 2022). ADHDers also experience high rates of mental ill-health (Sprafkin et al., 2007). Common mental ill-health presentations that are evidenced as occurring at higher rates amongst neurodivergent people include: depression, suicide ideation, anxiety, trauma, burnout, sleep disorders, substance use disorder, psychosis, non-suicidal self-injury (NSSI), and mania or hypomania (Lai et al., 2019; Trollor & Foley, 2015; Deprey & Ozonoff, 2018; Rosen, Mazefsky, Vasa, & Lemer, 2018; Singh & Zimmerman, 2015; Steenfeldt-Kristensen, Jones, & Richards, 2020; Cassidy, Bradley, Shaw, Baron-Cohen, 2018; Daviss, 2008; Furczyk & Thome, 2014; Fuller-Thomson, Rivièere, Carrique, & Agbeyaka, 2022; White, Chant, & Waghorn, 2005; Arnold et al., 2023).

Autistic people die by suicide at rates 7 times higher than non-autistic people (Jachyra, Rodgers, & Cassidy, 2022). The risk of dying by suicide is 13 times higher in autistic women compared to non-autistic women and the risk of suicidal ideation is 28 times higher in autistic children compared to non-autistic children (Cassidy et al., 2021). Autistic people are also 3 times more at risk of experiencing self-harm compared to neurotypical people (Pelton, 2022). Unfortunately, despite these horrendous statistical figures, autistic people are rarely, if ever, taken into consideration and acknowledged as a high-risk population in suicide prevention initiatives and efforts in Australia.

Neurodivergence, sleep, and psychoneuroimmunology

Neurodivergent people often experience sleeping difficulties such as insomnia and parasomnia (Singh & Zimmerman, 2015, Guller & Yaylaci, 2022; Galli et al., 2022; Wajszilber, Santiseban, & Gruber, 2018; Neurodivergent Insights, n.d.). Up to 50% of ADHDers (Hvolby, 2015; Wajszilber, Santiseban, & Gruber, 2018) and up to 80% of autistic people (Mazurek, Dovgan, Neumeyer, &
Malow, 2019; Hohn et al., 2019) experience chronic poor sleep. Sleeping problems contribute to an increased risk of developing both physical (Luyster, Strollo, Zee, & Walsh, 2012) and mental health (Freeman et al., 2020) conditions, including eating disorders (Allison, Spaeth, & Hopkins, 2016), (e.g., binge eating (Trace et al., 2012), night eating syndrome (Howell, Schenck, & Crow, 2009)).

Sleep influences immune function, and lack of sleep has been found to induce immune dysregulation (Besedovsky, Lange, & Born, 2012; Evans, Hucklebridge, & Clow, 2000, pp. 29-30), as was discussed by Garbarino et al. (2021): “sleep deprivation has been associated with alterations of innate and adaptive immune parameters, leading to a chronic inflammatory state.” More specifically, sleep deprivation has been associated with “sustained elevation in CRH [corticotropin-releasing hormone] release” (Guyon et al., 2017) and “CRH released from the brain and peripheral system can activate mast cells” (Kempuraj, 2019). Mast cells are prominent factors involved in the production and release of histamine (Thangam et al., 2018). Conversely, immune function influences sleeping patterns (Besedovsky, Lange, & Haack, 2019; Steiner et al., 2011).

Therefore, lack of sleep can increase the risk of immune-related health conditions either developing or worsening, including gastrointestinal diseases (e.g., irritable bowel syndrome [IBS]), which themselves represent a risk factor for developing eating disorders, as will be discussed in the following subsection titled Gastrointestinal problems.

Gastrointestinal problems

Immune function, particularly histamine, is an important factor in metabolic (Wang et al., 2010; Yamada, Tanimoto, & Sasaguri, 2016; Mika et al., 2021) and gastrointestinal disorders (Coruzzi, Adami, & Pozzoli, 2012; Smolinska, Winiarska, Globinska, & Jutel, 2022; Xie & He, 2005; Neumann & Seifert, 2014) as well as food allergies (Wood, 2006; Kawakami et al., 2022). In addition, there is emerging evidence of a relationship between mast cells, histamine, and gut microbiota (Shimbori et al., 2022; Traina, 2019; Schink et al., 2018; De Palma et al., 2022; Krell et al., 2021).

A significant proportion of autistic people and ADHDers are reported to experience chronic gastrointestinal symptoms such as abdominal pain, constipation, and diarrhoea (Leader et al., 2022; Ming et al., 2018; Donaghy, Moore, & Green, 2023). Other gastrointestinal conditions have also been identified as being more prevalent in autistic people, including gastroesophageal reflux disease (GERD) (Donaghy, Moore, & Green, 2023; Autism Eye, 2021), food allergies and intolerances, coeliac disease, Crohn’s disease, irritable bowel syndrome (IBS), and gastritis (McElhanon, McCracken, Karpen, & Sharp, 2014; Lee et al., 2018; Doshi-Velez et al., 2015; Ming et al., 2018; Kedem et al., 2020; Donaghy, Moore, & Green, 2023). The risk of developing eating disorders is higher for individuals who experience the aforementioned gastrointestinal conditions (Riehl & Scarlata, 2021; Rees, 2022; Harer, 2019) and eating disorders can also contribute to the worsening of gastrointestinal disorders (Santonicola, 2019).

Trauma, marginalisation, and (self-)stigma

Rates of post-traumatic stress disorder (PTSD) are disproportionately high in autistic people (Rumball, Happe, & Grey, 2020), ADHDers (Adler et al., 2004), and people with intellectual disability (Mevissen & de Jongh, 2010; Byrne, 2022; McNally, Taggart, & Shevlin, 2021). Autistic people are more likely to be victims of interpersonal violence, including sexual and domestic violence (Reuben, Stanzione, & Singleton, 2021; Ohlsson Gotby, Lichtenstein, Längström, & Pettersson, 2018; Gibbs & Pellicano, 2023). More specifically, one study found that 9 out of 10 autistic women experience sexual violence at least once in their lifetime (Cazalis, Reyes, Leduc, & Gourion, 2022). Across the gender spectrum, up to 72% of autistic people are found to experience physical interpersonal violence (Reuben, Stanzione, & Singleton, 2020). Individuals with intellectual disability, too, are more at risk of interpersonal victimisation (Bowen & Swift, 2019; Lin et al., 2010; Ward, Bosek, & Trimble, 2010).
In addition, research found that autistic individuals are at greater risk of developing PTSD from non-conventional events not captured within currently available trauma diagnostic tools and frameworks (Kerns et al., 2022; Rumball, Happe, & Grey, 2020; Reuben, Self-Brown, & Vinoski, 2022; Kerns, Newschaffer, & Berkowitz, 2015). Mental health concerns, experiences of trauma, and interpersonal violence are all risk factors for developing eating disorders (Brewerton, 2007; Brewerton, Alexander, & Schaefer, 2019; Kong & Bernstein, 2009; Reinhard et al., 2020) and should systematically be taken into account for prevention and treatment initiatives targeting eating disorders in neurodivergent populations.

Systemic oppression, stigma, and minority stress are relevant to consider as contributing factors to neurodivergent people's poor mental health outcomes (Han et al., 2023; Botha & Frost, 2020; Mueller, Fuemaier, Koerts, & Tucha, 2012; Commonwealth of Australia, 2022; Stoeber & Roundtree, 2020; Pelleboer-Gunnink, van Oorsouw, van Weeghel, & Embregts, 2019; Davidson, 2023; Huang, Trolley, Foley, & Arnold, 2023). Stigma may take the form of public stigma, whereby negative stereotypes, prejudice, and discrimination are directed from others towards the marginalised individual, or it can take the form of self-stigma (e.g., internalised ableism), whereby negative stereotypes, prejudice, and discrimination are internalised by the individual and directed to themselves (Corrigan, Bink, Schmidt, Jones, & Rüsch, 2016). Self-stigma has negative impacts on one's self-esteem and quality of life, and can also lead to learned helplessness (i.e., feeling as if pursuing personal goals, such as recovery, is futile) (Corrigan et al., 2016).

**Psychoneuroimmunology, metabolism, and eating**

Psychological stress, including trauma, has been associated with changes in immune function (Theoharides, 2020; Theoharides & Kalogeromitros, 2006; Persinger, 1977) as “psychological dynamics are strongly interrelated with the immune response” (Vasile, 2020). Psychological “stress induces the release of corticotropin-releasing hormone (CRH)” which triggers mast cell degranulation and associated histamine release (Kempuraj et al., 2017). This process, in turn, may impact on metabolism (Gui, 1998; Nowotny et al., 2010; Wolf et al., 2016; Yoshimoto et al., 2006), the cardiovascular system (Bealer, 1999; Krystel-Whittemore, Dileepan, & Wood, 2016), and feeding behaviours (Yoshimoto et al., 2006). Indeed, “the central histaminergic neuron system modulates various brain functions, including eating behavior” (Yoshizawa et al., 2009).

**Neurodivergence: Weight stigma and anti-fat bias**

Autistic people and ADHDers are more likely than neurotypical people to be fat (i.e., live in larger bodies) (Centre for Disease Control and Prevention, 2022; Hill, Zuckerman, & Fombonne, 2015; Cortese et al., 2015; Cortese, 2019). Weight is determined through the complex interaction of multiple factors across multiple domains. Efforts to understand the associations between autism, ADHD, and fatness with a nuanced understanding of the complex interactions between the neurodivergent experience of feeding and eating, sensory processing, executive function, health (e.g., immune disorders), systemic oppression, minority stress, and intersectionality (e.g., LGBTQIA+) are needed to improve eating disorder-related prevention and care initiatives.

Physiological factors such as hormonal imbalances, gastrointestinal problems, immune-related disorders, the use of medications that impact on appetite and metabolism (e.g., stimulants, antipsychotics, antidepressants), and the contribution of genetics are important to consider in this context. The increased incidence of co-occurring health, including mental health, conditions in neurodivergent people often results in increased interactions with medical professionals, some of whom may inadvertently engage in medical gaslighting (e.g., systematically and exclusively attributing health issues to weight) (Talumaa, Brown, Batterham, & Kalea, 2022). Such medical gaslighting may involve perpetuating weight stigma by emphasising fatphobic precepts associated with food morality (see Byrne, 2022) and encouraging diets to control weight, which evidence suggests is ineffective longer term and increases the risk of chronic dieting, weight cycling, and
disordered eating (NEDC, n.d.; Millner, 2022). As Millner (2022) puts it, “the trauma of weight stigma is systemic and seeps into every aspect of our lives including in the therapy room.”

As noted previously, neurodivergent people are affected by immune dysregulation at higher rates compared to neurotypicals, and there is growing evidence showing that histamine (predominantly released by mast cells) plays an important role in glucose metabolism as well as regulation of ghrelin and leptin (Jørgensen, Knigge, Warberg, & Kjaer, 2007; Żelechowska et al., 2018; Kempuraj et al., 2016). This was highlighted in Yoshimoto et al.’s (2006) study: “histamine plays a pivotal role in various physiological functions, such as feeding behavior and energy homeostasis.”

Leptin and ghrelin influence interoception (e.g., hunger, appetite), and in turn, interoception influences goal-directed behaviours (e.g., feeding and eating). There is also evidence suggesting that leptin’s range of action is complex as it “can rightly be considered, both structurally and functionally, as a proinflammatory cytokine” (Lord, 2006) which contributes to mast cells’ “degranulation and histamine release” (Żelechowska et al., 2018). Furthermore, leptin has been found to interact with the dopaminergic system (Wang et al., 2018; DiLeone, 2009; Davis et al., 2011; Billes, Simonds, & Cowley, 2012), itself contributing to sensory gating in the thalamus (Sánchez-González, García-Cabezas, Rico, & Cavada, 2005; Varela, 2014; Moghaddam, 2010).

Neurodivergent individuals report higher rates of burnout and psychological stress (Rumball, Happe, Grey, 2020; Kerns et al., 2022; Antshel et al., 2013; Bolstad, Lien, & Bramness, 2021; Mandy, 2022; Arnold et al., 2023) which influence immune function, in turn impacting on metabolism, eating and feeding behaviours, and weight, as discussed earlier. Therefore, it is important to factor in the interactions between minority stress, psychological trauma, and immune dysregulation in neurodivergent people in relation to the increased likelihood of fatness.

Sensory processing differences most likely play a role too. For example, interoceptive confusion or sensory seeking behaviours due to low registration (seeking sensory input through the ingestion of certain foods), sensory avoidant behaviours (e.g., avoidance of certain foods due to how they feel while being digested; or avoidance of certain foods such as fruits and vegetables because of their sensory properties being perceived as unpredictable or unpleasant), and food-related stimming (eating as a stim may influence energy intake). Alexithymia, a concept connected to interoception which many neurodivergent individuals experience (Poquérusse, Pastore, Dellantonio, & Esposito, 2018; Donfrancesco et al., 2013), can also impact on eating behaviours and contribute to weight fluctuation (e.g., emotional eating) (Nowakowski, McFarlane, & Cassin, 2013; Schmidt, Jiwany, & Treasure, 1993; Westwood, Kerr-Gaffney, Stahl, & Tchanturia, 2017; Speranza, Loas, Wallier, & Corcos, 2007).

A restrict-binge cycle may emerge due to the interaction of factors such as preference to eat alone, interoceptive confusion, and executive function differences leading to instances where one does not eat for extended periods of time which may increase the likelihood of subsequent binge eating. In addition, it should be noted that there is evidence suggesting that food restriction, binge eating, and restrict-binge cycles can impact on immune function and subsequently, metabolism and weight (Phillips, 1998; Yang et al., 2020).

Transgender and gender non-binary individuals may be at increased risk of presenting with atypical anorexia nervosa compared to cis-gendered individuals. Indeed, a study recently published noted that: “a greater proportion of gender non-conforming patients [are] diagnosed with atypical anorexia nervosa compared to cisgender peers” (Chaphekar et al., 2022). Given the high degree of interconnectedness between the neurodivergent and LGBTQIA+ communities, this is a relevant consideration demanding increased research and attention to improve eating disorder prevention and care for neurodivergent people.

It is worth noting that the diagnostic construct of atypical anorexia nervosa is controversial and highly debated because a) the primary differentiation between atypical anorexia nervosa and
traditional anorexia nervosa is weight-based (BMI), which can be argued to be a form of weight stigma in itself (see Harrop, 2022; Haines, n.d.; Strand et al., 2020), and b) individuals with lived experience of atypical anorexia nervosa express that they face systemic barriers to accessing proper healthcare and various forms of discrimination from health professionals, including anti-fatness (e.g., ‘not sick enough’), when seeking professional assistance for their eating disorder (Veillette, Serrano, & Brochu, 2018; Harrop, 2019; Eiring, Wik Hage, & Reas, 2021; Downs, n.d.). In addition, a systematic review conducted by Walsh, Hagan, and Lockwood (2022) uncovered that: “the level of eating disorder-specific psychopathology is significantly higher among individuals with atypical AN [anorexia nervosa] than among controls and as high or higher as among individuals with AN while levels of non-eating disorder psychopathology are similar.”

When a neurodivergent person is also fat, these marginalised identities intersect in a variety of ways, increasing the risk of experiencing psychological stress related to weight stigma. Being aware of the factors listed above is critical to the prevention, support, and treatment of eating disorders in neurodivergent individuals.

**Fluctuating capacity, inertia, and burnout**

Neurodivergent capacity is multidimensional and dynamic, and this may translate into variable ability to meet executive function and life’s demands, including with regards to engagement in therapy. When demands exceed capacity for an extended period of time, autistic people (Raymaker et al., 2020; Mantzalas et al., 2022; Higgins et al., 2021; Arnold et al., 2023) and ADHDers (Finch, 2021; Enright, 2021) can experience burnout. Neurodivergent burnout presents differently to neurotypical burnout and negatively impacts quality of life (Arnold et al., 2023; Finch, 2021).

Neurodivergent burnout can manifest in a variety of ways, such as increased exteroceptive sensitivity, increased interoceptive confusion, and increased difficulties associated with executive function (e.g., intermittent catatonia, inability to initiate tasks, increased time processing) (Mantzalas et al., 2022; Finch, 2021). Therefore, neurodivergent burnout is likely to influence neurodivergent people’s experiences of eating disorders and associated treatments. For example, increased exteroceptive sensitivity, interoceptive confusion, and executive function difficulties may: impact on the ability to go grocery shopping or engage in food preparation and cooking; impact on working memory (remembering to eat, drink, take medications, medical appointments); and, increase food aversions and/or appetite or satiety fluctuations.

**Financial disadvantage, employment discrimination, and food insecurity**

Neurodivergent people are disproportionately affected by unemployment and financial hardship due to widespread employment discrimination (Harvey et al., 2021; Wen, van Rensburg, O’Neil, & Attwood, 2022; Gonzales, 2022; Praslova, 2021; Meltzer, Robinson, & Fisher, 2019; Michael, 2021; Arnold, Easteal, Easteal, & Rice, 2010; Raymaker et al., 2023). Given the high rates of unemployment and financial hardship faced by neurodivergent people, and the fact that food insecurity represents a risk factor for eating disorders (Hazzard, Loth, Hooper, & Becker, 2020), it is appropriate to consider the possibility of food insecurity influencing the development and/or maintenance of eating disorders in neurodivergent individuals (see Brucker & Nord, 2016; Karpur et al., 2021).

**Adverse outcomes and iatrogenic harm: Neurodiversity-affirming considerations**

A growing body of research identifies serious concerns relating to the failure of mental health research and practice to thoroughly assess for, and transparently report on, adverse outcomes of interventions, whether it be regarding psychotherapy (Parry, Crawford, & Duggan, 2016; Watson et al., 2022; Beale, 2022), electroconvulsive therapy (ECT) (Sterling, 2000; Yeomans, 2022; Lisanby...
Insufficient attention has also been paid to assessing the cultural validity of interventions (Solano-Flores & Nelson-Barber, 2001) and their impact on long-term wellbeing in both general (Kaidesojja, Cooper, & Fordham, 2022; Flake & Fried, 2020) and neurodivergent populations (Sharma et al., 2021; Champ, Adamou, & Tolchard, 2021).
Much mental health research mainly draws on the opinions and perspectives of clinicians and/or researchers as proxy reporters (see Sharma et al., 2021). Assessing the efficacy and suitability of any mental health treatment should involve carefully balancing the views of both the clinicians and/or researchers and the participants/patients to prevent epistemic injustice, paternalism, and iatrogenic harm (see Hayes & Za'Ba, 2021; Pilgrim, 2018; Gotzsche & Sørensen, 2020; Beale, 2022; Flake & Fried, 2020; Read, Ross, & Timimi, 2022; McRae, 2022). Dignity-based evidence demands that patients’ perspectives and understandings of their own experiences in the world are sought, valued, and utilised to challenge the status quo so as to facilitate “dignity-based practice” (Abimbola, 2023). Such a practice demands epistemic humility and critical questioning of research methods, researchers’ biases or conflicts of interests, and a dedication to epistemic justice.

Other issues related to mental health research that need to be addressed to ensure neurodiversity-affirming practices in the future are:

2. Undisclosed conflicts of interest (Bottema-Beutel & Crowley, 2021).
4. Quality of the evidence: assessing long-term effects and generalisability of effects (Kaidesoja, Cooper & Fordham, 2022; Moncrieff et al., 2022; Sandbank et al., 2020).
Research considerations:

- Research exploring eating disorders in forms of neurodivergence other than autism and ADHD (e.g., dyspraxia, dyslexia, intellectual disability, giftedness, apraxia, misophonia, synaesthesia, TS) is urgently required.
- Research exploring the role of neurodivergent trauma (cultural/developmental/sensory) and neurodivergent burnout in relation to eating psychopathology is required.
- Further research is needed to better understand the influence of the double empathy problem, minority stress, and masking on eating disorder pathophysiology and aetiology in neurodivergent individuals.
- More research is needed to better understand the impact of unemployment and food insecurity among neurodivergent people given the increased risk of developing eating disorders, particularly bulimia nervosa and Binge eating disorder, associated with food insecurity.

Practice and service considerations:

- All services and interactions targeting neurodivergent individuals should be trauma-informed, gender-affirming, and neurodiversity-affirming.
- Screening/assessment:
  - The Swedish Eating Assessment for Autism Spectrum Disorders (SWEAA) may be used to investigate feeding difficulties in autistic adolescents and adults.
  - The Aut-Eat (AEQ) may be used to investigate feeding difficulties in autistic children.
- Accommodations:
  - Long-term motor difficulties that impact eating should not be pathologised as eating disorder symptoms and should be accommodated (e.g., by providing specific cutlery, allowing food to be cut into pieces small enough to allow for easy swallowing, allowing more time for eating/drinking).
  - Executive function difficulties and interoceptive confusion that impact feeding and eating should be supported, even if doing so appears to be counter to goals of intuitive eating. For example, using meal and snack reminders as prompts, encouraging the use of pre-made meals to accommodate for decreased satiety signals, or breaking down the traditional daily three main meals to accommodate for increased satiety signals.
PART 2: Prevention and advocacy
Part 2: Prevention and Advocacy

Overview

Prevention of feeding difficulties and eating disorders is a high priority as not only do eating disorders carry a high burden of morbidity and mortality (Hay et al., 2017), but current treatments have a poor-to-moderate success rate at achieving recovery (Marshall et al., 2014; Ledford et al., 2017; Lock & LeGrange, 2019) and the availability of eating disorder treatment services are highly constrained with inequity in terms of accessibility (Thompson & Park, 2016). As such, effective prevention interventions aim to deliver benefits through avoiding the costs associated with poor health and eating disorder treatment.

Neurodivergent individuals are overrepresented in eating disorder populations and being neurodivergent while affected by an eating disorder has been associated with an increased risk of experiencing a prolonged and more severe eating disorder presentation (Saure et al., 2021; Westwood & Tchanturia, 2017; Adamson et al., 2022), underscoring the importance of a focus on the prevention of eating disorders in neurodivergent individuals.

Prevention

Overview

Currently, no specific feeding and eating disorder prevention interventions have been developed for neurodivergent individuals. However, it is the authors’ opinion that deepening understanding of the neurodivergent experience of eating and body awareness, and of the neurodivergent life experience more generally, will facilitate the design and delivery of neurodiversity-affirming supports.

General (neurotypical) paediatric feeding advice

General feeding advice targeting children centres feeding approaches that draw on the tenets of responsive feeding (Black & Aboud, 2011; Finnane, Jansen, Mallan, & Daniels, 2017), which has been identified as drawing on self-determination theory (Cormack et al., 2020), as well as Ellyn Satter’s Feeding Dynamics model (operationalised through Satter’s Division of Responsibility in Feeding) (Satter, 1995; Satter, 2022).

Black and Aboud (2011) identify a responsive approach to feeding as including:

- Nutritious and developmentally appropriate food in a suitable setting, that is, a setting that minimises distractions where the child is seated and facing mealtime companions, and where expectations for the meal and clearly communicated;
- A child’s hunger and satiety cues are both encouraged and attended to; and
- The child is responded to in a way that is attuned and aligned with the child’s developmental capacity (2011).

Responsive feeding therapy: values and practices (Rowell, Wong, Cormack, & Moreland, 2020) identifies responsive feeding therapy as:

“... an overarching approach to feeding and eating interventions applicable to multiple disciplines and across the lifespan… [it] facilitates the (re)discovery of internal cues, curiosity, and motivation, while building skills and confidence.”

Core values of responsive feeding therapy are autonomy, relationship, internal motivation, individualised care, and competence (Rowell et al., 2020). It represents a trauma-informed and
attuned feeding practice, acknowledging the role of the child’s environment, centring internal regulation, and respecting autonomy and self-determination.

Nonresponsive feeding includes feeding practices that reflect a lack of reciprocity between the parent/caregiver and child, for example:

- Where the parent/caregiver is overcontrolling of the child’s eating (controlling/pressuring);
- When the child directs the feeding experience, taking control from the parent/caregiver (‘indulgence’); or
- When the parent/caregiver is not engaged in the feeding dynamic (‘uninvolved’) (Black & Aboud, 2011).

Feeding practices that are controlling and pressuring have been termed ‘coercive’ feeding practices, and those that reflect indulgence or a lack of control are termed ‘permissive’ (Vaughn et al., 2016). Both types of nonresponsive feeding practice have been associated with negative health and wellbeing outcomes. For example, research exploring coercive feeding practices suggests that increased maternal control (restriction) of AFAB children’s intake may lead to increased eating in the absence of hunger (Birch, Fisher, & Davison, 2003) and for both AMAB and AFAB adolescents, is associated with disordered eating behaviours (Loth, MacLehose, Fulkerson, Crow, & Neumark-Sztainer, 2014).

Research exploring the factors that increase the likelihood that parents will engage in coercive feeding practices found that maternal eating disorder symptoms were more influential than their food literacy, body mass index, or socioeconomic status (Norton, Parkinson, Harris, & Hart, 2021). Indeed, this understanding of the role of maternal disordered eating on food parenting practices, and the known negative impact of coercive feeding practices in children’s eating behaviours, may help explain the observed phenomena of intergenerational transfer of disordered eating patterns (Arroyo, Segrin, & Andersen, 2017; García de Amusquibar & De Simone, 2003).

Family feeding: The role of responsive feeding practices

Research exploring the impact of responsive versus nonresponsive feeding practices on neurodivergent children has not been conducted. However, as neurodivergent individuals are at increased risk of feeding difficulties and eating disorders, it is proposed that coercive feeding practices, which are associated with increased disordered eating, are risky and are likely to be counterproductive.

Family mealtimes are evidenced as playing a role in supporting family cohesion, the development of a healthy lifelong relationship with food and eating, and improvement in psychosocial outcomes, including an association with lower rates of disordered eating and eating disorders (Larson et al., 2016).

Research centered on neurodivergent family mealtimes has, however, largely focused on negative aspects of the experience, viewing the interaction through a deficit lens (Curtiss & Ebata, 2019). Indeed, research has found that parents of neurodivergent children are at increased risk of experiencing family mealtimes as stressful and difficult (Postorino et al., 2015; Curtin et al., 2015), particularly when there is a mismatch between parental expectations and their child’s mealt ime behaviours (Adams, Verachia, & Coutts, 2020; Curtiss & Ebata, 2019; Curtiss & Ebata, 2021).

There is limited research that has attempted to provide a more balanced view of the mealtime experiences of families of autistic children. Curtiss & Ebata’s qualitative research (2019) found that parents tended to over-pathologise their autistic child’s selective eating, potentially due to misconceptions about what developmentally typical selective eating looks like, because the children demonstrated more extreme behavioural reactions to non-preferred food exposures, or they held an
idealised version of family meals in mind when comparing the reality of their own family mealtimes, leading to a sense of disappointment (Curtiss & Ebata, 2019).

Curtiss and Ebata (2021) also explored the processes involved in achieving meaningful and functional mealtimes of families with autistic children. They found that, in order to balance the urge to control the feeding experience with the urge to accept their child where they were at, parents had to master skills that allowed them to align their expectations of their child’s abilities and challenges, and then provide support that strengthened their child’s abilities and overcame their challenges.

Paediatric feeding research has typically attributed blame for feeding difficulties to parents who accommodate their child’s feeding preferences, identifying them as part of the “vicious cycle” that erodes the key processes associated with eating, “which further erodes an already fragile parent-child mealtimes relationship” (Sharp et al., 2017, p. 117). However, qualitative research suggests that such parental accommodation of the feeding experience to meet the child’s needs may actually be adaptive and lead to improvements in other wellbeing domains such as reduced anxiety (Curtiss & Ebata, 2021; Bamigbade et al., 2022).

For example, qualitative research found that the mothers of children with TS or a provisional tic disorder, many of whom were also ADHDers and/or autistics, who understood, accepted, and accommodated their child’s different mealtimes abilities and preferences were more content and experienced family mealtimes as less stressful compared to the mothers who were persisting in their efforts to achieve harmonious, sit-down family mealtimes (Bamigbade et al., 2022). A similar finding was apparent in Curtiss and Ebata’s work (2021).

These studies suggest that parents and caregivers may reduce negative interactions around family mealtimes, or may facilitate more enjoyable family mealtimes, by seeking to understand and accept their child’s feeding, eating, and mealtimes abilities and preferences. Although controlling behaviours may be identified as an expression of their love by some parents or caregivers, such behaviours have also been observed to have adverse impacts in the form of increased family stress and negative relational impacts.

Accepting a child’s abilities to engage with specific foods whilst providing affirming support for the areas in which they experience difficulty is respectful of autonomy and supports self-determination (Cormack et al., 2020). These align with the values identified as foundational to responsive feeding (Rowell et al., 2020). Indeed, responsive feeding (Rowell et al., 2020) is well-positioned as a neurodiversity-affirming feeding framework when implemented with an awareness that neuronormative feeding and eating expectations are not necessarily a best-fit for neurodivergent people.

Expanding on this idea regarding the need to critically appraise hegemonic neuronormative feeding and eating expectations on an individual basis when working with neurodivergent individuals and families, it is helpful to consider how neuronormative feeding and eating expectations, even when delivered as part of a well-intentioned responsive feeding practice, may place excessive and unnecessary pressure on family mealtimes. This issue may be exacerbated further when an idealised version of ‘normal’ family mealtimes is held as a goal.

Examples of neuronormative feeding goals that are important to consider when working with children, adolescents, and their families include:

- Goals relating to diet composition (variety) or flexibility with the ways in which food is served (e.g., cooking method, brand, cutlery, crockery),
- Eating socially,
- Eating intuitively and/or eating regularly without prompts/reminders,
- Tolerating or enjoying sit-down family meals,
- Not leaving the table during the meal,
- Engaging in neuronormative conversation whilst eating (e.g., small talk, eye contact),
- Eating out at noisy and/or crowded restaurants or cafes,
- Spontaneous eating,
- Discouraging or withholding screens and other distractions to encourage focus on the eating experience,
- Not engaging in emotional eating,
- Serving every family member the same meal (e.g., no short order cooking).

These are all goals that are not inherently appropriate for a neurodivergent individual or their family to work towards unless the neurodivergent individual identifies them as goals they would like to pursue.

**Prevention: Schools and teachers**

The National Eating Disorders Collaboration (NEDC) has produced eating disorder prevention guidance for schools in Australia: *Eating disorders in schools: Prevention, early identification and response (NEDC, 2016)*. Many of the recommendations in this guide are relevant to preventing eating disorders in neurodivergent children and adolescents. However, as the neurodivergent eating disorder experience is different to the neurotypical one, some modifications may be beneficial:

- Age of eating disorder onset has been shown to be younger in neurodivergent children (*Brede et al., 2020; Babb et al., 2022*), and therefore, it may be important to extend universal prevention efforts to younger years in addition to what is currently indicated (12-15 years).
- Across all age groups, there is a focus on 'healthy eating.' However, neurodivergent children often have sensory processing differences that can make the experience of eating certain foods, including those which are considered healthy, distressing. The language and the delivery of this healthy eating message may also need to be reconsidered, taking care to avoid black and white messaging that could be misunderstood as a hard and fast rule (see *Livia, 2023*).
- Across all age groups, there is a strong focus on body image. The role of body image concerns in eating disorder presentations amongst neurodivergent individuals is not homogenous. Autistic individuals with restrictive eating disorders report that weight, shape, and size are less important factors driving their anorexia nervosa compared with non-autistic individuals (*Brede et al., 2020*). On the other hand, ADHDers with eating disorders have been found to have higher body image concerns than non-ADHDers with eating disorders (*Bisset, Rinehart, & Sciberras, 2019; Curtin, Pagoto, & Mick, 2013*). Therefore, it is important that this heterogeneity is considered in all messaging regarding body image.

**Research considerations:**

- Research is needed exploring the effectiveness and appropriateness of a neurodiversity-affirming responsive feeding approach to support positive feeding and eating experiences, and associated wellbeing outcomes for neurodivergent children, adolescents and their families.
- Research is necessary exploring eating disorders in relation to the diversity of neurodivergent presentations other than autism and ADHD.
- Research exploring the role of neurodivergent trauma and neurodivergent burn out in relation to eating psychopathology is warranted.
- Research that uses a strengths-based lens will provide practical guidance on how clinicians can support neurodivergent families to approach family mealtimes in an affirming way.

**Practice and service considerations:**

- Interventions should respect the autonomy and agency of the neurodivergent child.
• Interventions must consider the adaptations that may be required in the child’s environment to meet their sensory needs.
• Efforts to modify mealtime behaviours should focus on responsive feeding in combination with neurodiversity-affirming environmental adaptations and appropriate goals.
• Interventions targeting mealtime behaviours and/or food intake that utilise coercive control, systematic desensitisation, behavioural approaches, or place the responsibility for change on the child (e.g., to change their behaviours, to eat differently, to eat more/less, to eat faster/slower) are not affirming and are contraindicated.
• Neurodiversity-affirming psychoeducation for parents and caregivers on their child’s potential sensory, social, and cognitive differences that influence food preferences, mealtime participation, and food consumption is likely to facilitate a greater degree of acceptance.
• Oral nutrition supplements, vitamins, and/or mineral supplements can be used when medically safe under the guidance of an Accredited Practising Dietitian (APD) to address nutritional deficiencies or a chronic inadequate intake of one or more nutrients in a neurodivergent person’s diet.

**Advocacy**

**Overview**

There is a significant amount of advocacy required across all levels of eating disorder care, including in research and policy spaces, to ensure that neurodivergent people with feeding and eating disorders access affirming services and support in a timely manner.

**Screening, assessment, and supports**

Advocacy is required to increase awareness of the overrepresentation of neurodivergence in all eating disorder presentations, to facilitate screening for neurodivergence (especially autism and ADHD) as early as possible, and to ensure those identified as potentially neurodivergent can access timely and affordable assessment services.

Accessibility of timely and affordable neurodevelopmental assessments is problematic, characterised by lengthy wait times, geographic inequality in services, and requiring a significant financial outlay which may be beyond the means of many neurodivergent people which are shown to be at higher risk of experiencing financial disadvantage.

Furthermore, members of racial, ethnic, and/or cultural minorities (e.g., Aboriginal and Torres Strait Islander) are under-identified and may experience even more significant barriers to timely access to neurodivergent assessment and culturally safe post-diagnostic support(s) (Bailey & Arciuli, 2020). It has been noted that: “Aboriginal and Torres Strait Islander people with developmental disabilities such as autism are among the most marginalised people in Australian society” (Bailey & Arciuli, 2020).

Identification of neurodivergence has been found to support the development of a positive neurodivergent identity and improved psychosocial wellbeing (Cooper et al., 2022). A timely identification of neurodivergence in an individual presenting with feeding difficulties or an eating disorder will not only help tailor interventions and supports to best meet individual needs, it also can help with improving understanding the eating behaviours themselves. This, therefore, underpins the importance of advocating for more accessible, affordable, and culturally appropriate assessment services.
Neurodivergence is positively correlated with sexual and gender diversity, and therefore, there is a large intersection between the neurodivergent and LGBTQIA+ communities (Maroney & Horne, 2022; Walker & Raymaker, 2021). As such, neurodiversity-affirming eating disorder prevention efforts must also be inclusive of, and affirming of, all sexual and gender orientations and expressions.
PART 3:
Early identification
Part 3: Early Identification

Overview

Early identification involves the identification and screening of eating disorders in any setting to facilitate access to timely treatment for anyone experiencing an eating disorder. Evidence supports the benefit of early identification in treatment success in the general population (Austin et al., 2022).

Earlier age of onset of eating disorders

Evidence identifies a higher prevalence of selective eating behaviours and feeding difficulties in neurodivergent children compared to their neurotypical peers (Baraskewich et al., 2021; Mayes & Zickgraf, 2019; Cermack et al., 2010; Nicholls, Barrett, & Huline-Dickens, 2014). Moreover, evidence also suggests that autistic individuals develop eating disorder symptoms at an earlier age than their non-autistic peers (Brede et al., 2020; Babb et al., 2022). Early intervention efforts will benefit from taking these aspects of the neurodivergent eating experience into consideration.

Eating disorder screening in neurodivergent individuals

Considering the increased risk of experiencing eating disorders for neurodivergent people, implementing regular eating disorder screening in primary care, especially at key moments involving potentially stressful life events and/or transitions (e.g., starting school, changing school, first periods, romantic breakups, new employment, loss of a loved one, pregnancy, menopause), is likely to improve early detection and intervention efforts.

Eating disorders: a professional resource for general practitioners (NEDC, n.d.) is a guide for general practitioners delivering eating disorder care to the general population. There are no guidelines specifically designed for neurodivergent people at this time. It has recently been argued that there is a need to focus efforts on improving the positive predictive value of existing eating disorder screening tools, as well as improving the confidence of primary care practitioners to use these tools and improving the accessibility of eating disorder care pathways (Hay, Hart, & Wade, 2022).

Standard self-report eating disorder screening instruments include:

- Eating Disorder Screen for Primary Care (ESP)
- Eating Disorder Examination-Questionnaire Short (EDE-QS)
- Eating Disorder Inventory-3 (EDI-3)
- SCOFF Questionnaire (SCOFF)
- Nine Item ARFID Screening (NIAS)
- Binge Eating Disorder Screener (BEDS-7)

It is important to acknowledge that these tools have not been developed specifically for neurodivergent individuals experiencing feeding difficulties and eating disorders. Therefore, the authors would like to highlight the possibility that this may influence their sensitivity and specificity when applied in neurodivergent individuals.

Systematic autism and ADHD screening for all patients with eating disorders

When an individual is diagnosed with an eating disorder, autism and ADHD screening should systematically be undertaken before any additional psychiatric diagnosis is considered. This will inform the need for neurodiversity-affirming care and reduce the high rates of misdiagnosis and diagnostic overshadowing which have detrimental consequences. Indeed, as noted before, being
Identified as neurodivergent has been shown to significantly increase self-awareness, self-compassion, and improve overall wellbeing, which has key implications for eating disorder recovery (see Hansson Halleröd, Ankarsäter, Råstam, & Hansson Scherman, 2015; Murphy, Flower, & Jellett, 2022; Leedham, Thompson, Smith, & Freeth, 2020; Horner, 2023).

Secondary screening for dyslexia, dyspraxia, giftedness, misophonia, and synaesthesia may also be undertaken to ensure treatment is tailored to meet the neurodivergent person’s individual support needs.

Validated self-report inventories are available to guide initial screening for neurodivergence in adolescents and adults:

- **ADHD**: Adult ADHD Self-Report Scale (ASRS-5)
- **Autism**: Ritvo Autism and Asperger Diagnostic Scale (RAADS-14)
- **Dyslexia**: York Adult Assessment-Revised (YAA-R)
- **Dyspraxia**: Adult Developmental Co-ordination Disorders/Dyspraxia Checklist (ADC)
- **Giftedness**: International Cognitive Ability Resource (ICAR)
- **Misophonia**: Duke-Vanderbilt Misophonia Screening Questionnaire (DVMSQ)
- **Synaesthesia (visual)**: Revised Test of Genuineness (TOG-R)

Some inventories, such as the ADOS-2, have been found to miss a substantial proportion of autistic AFAB individuals due to embedded gender biases (Zeliadt, 2017). Similarly, the Continuous Performance Test (CPT) should be used with caution as recent studies have casted a shadow on its ability to assess for ADHD due to limited sensitivity and specificity, particularly in the context of the inattentive subtype (Baggio et al., 2019; Roebuck, Freigang, & Barry, 2016).

It should also be noted that autistic scholars are currently developing autism assessments that are based on the autistic person’s standpoint (Ratto et al., 2022) as opposed to third-party neuronormative interpretations of outwardly observable behaviours. The development of self-report inventories using a participatory and phenomenological approach is an emerging practice in mental health research that helps to mitigate the risks of paternalism and epistemic injustice (see Pelto-Riti, Engstrom, & Engstrom, 2013).

### Neurodivergence, eating disorders, and the immune system

Given that immune disorders frequently co-occur with neurodivergence (Cses et al., 2022; Hegvik et al., 2021; Doherty et al., 2022) and constitute an increased risk of developing eating disorders (Hedman et al., 2018), and the bidirectional relationship between psychological stressors and the immune system (Morey, Boggero, Scott, & Segerstrom, 2015; Segerstrom & Miller, 2004), it is important to a) screen neurodivergent people for eating disorders at key life stages likely to induce psychological stress, and b) assess neurodivergent people with eating disorders for immune-related health conditions. These immune-related concerns impact on eating disorder pathophysiology and disordered eating behaviours impact on the immune system (Hedman et al., 2018; Marcos, 1997; Corcos et al., 2003). Therefore, immune-related health conditions need to be taken into consideration and adequately addressed as needed by health professionals across the whole spectrum of care, from prevention through to recovery.
**Anti-fat bias**

Both explicit and implicit forms of biases are common and have significant negative consequences for fat people (Elran-Barak & Bar-Anan, 2018; Lawrence et al., 2022; Schupp & Renner, 2011). Anti-fat biases unfortunately permeate our cultural and individual beliefs, our behaviours and relationships, and our policies and institutions (including healthcare) (Lawrence et al., 2022; Setchell et al., 2014). Fat people are routinely denied appropriate healthcare (e.g., medical gaslighting) or receive a far lower quality of care (Lawrence et al., 2022).

Negative experiences have been reported by fat people seeking eating disorder care (NEDC, 2022; Bidstrup, Brennan, Kaufmann, & de la Piedad Garcia, 2022). Research suggests that both autistic and ADHD individuals are more likely to be fat, due to a variety of interconnected factors, including psychosocial, genetic, and biological (Sedgewick, Leppanen, & Tchanturia, 2020; Cortese, 2019). This further justifies the importance of working to address anti-fat bias in neurodivergence-related eating disorder prevention, identification, initial response, and treatment.

**Socialising and communication differences**

As identified previously, neurodivergent people demonstrate differences in socialising and communication style and preferences. Clinicians who are aware of these differences and are able to respect and accommodate communication preferences are better placed to overcome communication barriers such as that described by the double empathy problem.

**Communication about weight**

When assessing eating disorders in neurodivergent individuals, as in all individuals presenting with eating disorders, avoiding language that implies a judgement related to weight, body shape, or level of ill-health is recommended. Differences in cognitive styles, such as black and white thinking (Stark et al., 2021), can exacerbate eating disorder thoughts and behaviours. For example, autistic individuals with an eating disorder who are turned away from treatment, or who are told they are not ‘sick enough’ or ‘underweight enough’ when seeking support, may interpret this as not being successful in their eating disorder and may increase their level of restriction or other eating disorder-related behaviours, further compromising health and wellbeing. Therefore, weight-based cut-offs like ‘atypical’ anorexia nervosa are potentially problematic for the neurodivergent community as they can be interpreted literally as judgement of an individual’s inability to achieve an arbitrary weight goal.

**Research considerations:**

- Considering the diverse range of eating disorder presentations in neurodivergent individuals, further research is needed to develop more specific and socially valid psychometric instruments using a phenomenological approach (see Fuchs, Messas, & Stanghellini, 2019; Messas, Tamelini, Mancini, & Stanghellini, 2018).

- Adapted eating disorder screening tools also need to be developed and validated for use in the context of intellectual disability (see Gravestock, 2003).

**Practice and service considerations:**

- Screening neurodivergent individuals for eating disorders as part of routine primary care, especially at times of major life stress and transitions, has potential to facilitate early identification.
• When an individual is diagnosed with an eating disorder, autism and ADHD screening should systematically be undertaken before any additional psychiatric diagnosis is considered.

• If a neurodivergent individual presents with feeding difficulties or disordered eating alongside a history of chronic and recurring gastrointestinal symptoms, joint pain, or allergy symptoms, secondary screening should be considered for commonly co-occurring conditions such as, but not limited to, hypermobile Ehlers-Danlos syndrome (hEDS), postural tachycardia syndrome (POTS), polycystic ovarian syndrome (PCOS), and irritable bowel syndrome (IBS).

• Socialising and communication differences and preferences must be accommodated to facilitate the equitable and effective delivery of eating disorder services.
PART 4:
Initial response
Part 4: Initial response

Overview

Eating disorders are associated with significant morbidity and mortality, and interventions to restore a non-disordered eating pattern are necessary. Also, the neurodiversity paradigm promotes neutral acceptance towards neurocognitive differences and prioritises their conservation as a form of human diversity, rendering efforts to eradicate, cure, treat, or ‘normalise’ differences antithetical. Therefore, when working with neurodivergent individuals requiring feeding and eating disorder support, care must be taken to consider the unique drivers and features of feeding and eating disturbances in neurodivergence, relevant intersectional considerations, and critically reflect on whether or not interventions promoting neuronormative feeding and eating expectations are appropriate.

In addition to the usual medical and psychological assessments that are standard practice in eating disorder care, neurodiversity-affirming eating disorder care requires a developmental history to disentangle neurodivergent eating behaviours from eating disorder symptomatology, a concern that has been raised in the eating disorder and autism research (see Saure et al., 2021). This process serves the purposes of a) preventing the conflation of neurodivergent eating and feeding needs with eating disorder symptoms (and the potential that may bring for medical gaslighting or inappropriate interventions), and b) promoting a strengths-based approach.

Developmental history

A developmental history is indicated to a) inform accurate diagnoses, b) distinguish between neurodivergent traits and eating disorder symptoms, and c) inform individualised and holistic neurodiversity-affirming eating disorder care.

Some health professionals may misinterpret neurodivergent eating and feeding behaviours and needs as being solely due to the eating disorder and/or cognitive alterations related to malnutrition (Saure et al., 2021). If there is doubt about behaviours or traits being related to neurodivergence or the eating disorder, it is possible to assess whether these were present before the eating disorder developed. Neurodivergent feeding and eating behaviours will typically predate the onset of the eating disorder, information that can be obtained by taking a detailed developmental history from the patient and their family or carers (Saure et al., 2021). If these behaviours or traits were present before the eating disorder, it is likely they are neurodivergent traits, and as such, accommodations should be explored. However, if intervention is indicated due to concerns for medical safety, patient autonomy and perspectives must be sought, considered, and respected in order to minimise risk of iatrogenic harm.

When the underlying drivers of behaviours of concern are not correctly disentangled, inappropriate interventions may be applied whereby the genuine sensory, motor, and cognitive feeding or eating needs relating to an individual’s neurodivergence are at risk of not being understood nor accommodated. Limiting an eating or feeding behaviour that is rooted in neurodivergence, and unrelated to the eating disorder per se, may negatively affect an individual’s ability to regulate and/or cause unnecessary distress. The following 2 examples demonstrate typical scenarios that confuse neurodivergence-related eating behaviours with those of the eating disorder:

- Separating foods on a plate may be a key sensory self-regulating mechanism of many autistic people and preventing them from doing so may increase their experience of eating-related anxiety and the difficulty they experience engaging in the mealtime.
- Individuals with oro-motor difficulties (e.g., dysphagia) may need to cut their foods into small pieces to facilitate safe and easy swallowing. This eating behaviour is common amongst
neurodivergent individuals (e.g., dyspraxia, apraxia) and is not inherently pathological in and of itself. If a person who needs this accommodation is denied the opportunity to receive it, the anxiety associated with mealtimes may increase, potentially reducing overall intake.

The importance of identifying neurodivergence in those affected by eating disorders and adequately tailor care pathways was highlighted by Kinnaird and Tchanturia (2021): “The ability to accurately identify autism cases in AN populations is clinically important, as autistic people with AN are at risk of poorer illness and treatment outcomes in the absence of appropriately adapted eating disorder treatments.”

Special consideration is warranted for feeding and eating disorders that emerge very early in childhood (e.g., pica, ARFID) as this early onset of feeding concerns can make it more difficult to clearly identify whether a feeding or eating behaviour is related to being neurodivergent or is driven by the disorder. In these instances, interventions should aim to be neurodiversity-affirming whenever possible to prevent the risk of iatrogenic harm.

**Strengths-based approach**

Identifying an individual’s passions and interests is important as these allow for the recognition of individual strengths that may, directly or indirectly, support an individual’s wellbeing if autonomously applied towards recovery. These interests and strengths should be utilised to enhance wellbeing and quality of life, rather than being co-opted as a treatment strategy for short-term gains.

Neurodivergent people often report feeling great satisfaction (e.g., mental stimulation, self-soothing, inner peace) from engaging with their monotropic interests and passions (Laber-Warren, 2021; Grove, Hoekstra, Wierda, & Begeer, 2018; Urbanowicz et al., 2019; Murray, Lesser, & Lawson, 2005). In this way, special interests and hyperfocuses can be a regulating point that supports self-regulation and should be encouraged. However, it is possible for eating disorder behaviours to become a special interest or hyperfocus (e.g., calorie or carbohydrate counting), in which case it is necessary to focus on redirecting or adapting that intense interest or fixation to be more aligned with the attainment of wellbeing. This nuanced approach to special interests and hyperfocus is important as these monotropic interest systems form a stabilising anchor point for neurodivergent individuals (Murray et al., 2005) and therefore, preventing access or engagement without simultaneously providing appropriate support is likely to cause increased anxiety and/or significant distress (Murray, Milton, Green, & Bervoets, 2022).

**Embracing neurodiversity-affirming care**

The Draft National Guideline for Supporting the Learning, Participation and Wellbeing of autistic Children and their Families, released for public comment in 2022, includes the strong consensus recommendation that: “Supports should be neurodiversity-affirming, embracing each child’s unique understanding of other people and the world around them, and not seek to ‘cure’ autism” (Trembath et al., 2022). This recommendation reinforces the importance of coordinating neurodiversity-affirming eating disorder care as part of the initial response.

To this end, services which are founded on behavioural approaches relying on operant conditioning (e.g. ABA), deliver manualised psychological treatments without individual adaptation, do not respect and uphold patient autonomy and agency, implement neuronormative treatment goals without critical appraisal of their potential to harm neurodivergent people, or pathologise neurodivergence, are not able to claim that they are neurodiversity-affirming in their practice (Kohn, 2020; Kupferstein, 2018; Lynch, 2019). Indeed, autistic adults who experienced ABA in childhood reported that they "suffered significant negative long-term consequences [and] believe that applied behavior analysis is an unethical intervention" (Anderson, 2022) and recalled a “predominantly detrimental impact of ABA” (McGill & Robinson, 2021).
Research considerations:

- Empirical research could be used to inform the development of a specific assessment tool to assist with identifying eating behaviours that are neurodivergent traits versus eating disorder symptoms.

- Research exploring ARFID in relation to neurodivergence is needed to disentangle neurodivergent traits from ARFID symptoms.

Practice and service considerations:

- A full developmental history is necessary to support the identification of neurodivergence in all eating disorder patients and identify feeding and eating behaviours that are neurodivergence-related as opposed to eating disorder-related.

- Assessment of sensory processing, executive function, and masking (camouflaging) can inform intervention individuation and identify necessary accommodations to support treatment engagement and effectiveness and prevent iatrogenic harm.

- Neurodivergence is associated with diverse strengths and interventions can seek to engage these strengths in an affirming and respectful manner towards the process of recovery.

- Whenever disordered eating behaviours such as calorie or carbohydrate counting become entangled with special interests and/or hyperfocuses, it is important to gently redirect that focus towards another area or topic which is not self-destructive.
PART 5:
Treatment
Part 5: Treatment

Overview

This section provides some recommendations for community-based and inpatient treatment programs in order to increase inclusivity and accessibility for neurodivergent people affected by eating disorders. A summary of existing care pathways intended for neurodivergent individuals is provided, along with an explanation as to whether these may or may not be neurodiversity-affirming. The focus is to discuss what a neurodiversity-affirming approach to care entails within these different care settings.

Community-based treatment

Overview

Australian clinical practice guidelines available for the general treatment of eating disorders include:

- Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of eating disorders (Hay et al., 2014), and
- Management of eating disorders for people with higher weight: Clinical practice guidelines (Ralph et al., 2022).

However, traditional eating disorder treatment modalities have been identified as failing to meet the unique needs of neurodivergent patients as they do not incorporate an understanding of their unique aetiological and maintaining factors (Adamson et al., 2020; Babb et al., 2021; Dell’Osso et al., 2018; Babb et al., 2022; Brede et al., 2022; Mandy, 2022; Lipinski et al., 2022; Svedlund, Norring, Ginsberg, & von Hausswolff-Juhlin, 2018), potentially contributing to poorer treatment engagement and outcomes observed in this population (Saure et al., 2020; Westwood & Tchanturia, 2017; Testa et al., 2020).

It is therefore reasonable that treatment modifications incorporate a deep understanding of the neurodivergent feeding, eating, and life experience more broadly, in order to arrive at appropriate, acceptable, and effective supports and interventions which simultaneously promote a positive neurodivergent identity. We, the authors, ask that eating disorder researchers, service managers, and clinicians remain open-minded and self-reflective, practising with epistemic humility, in an effort to bravely challenge neuronormative treatment conventions and take an ethical and person-centred approach to improve treatment engagement, appropriateness (social validity), prevent iatrogenic harm, and contribute to evidence that will inform dignity-based practice.

Characteristics of neurodiversity-affirming interventions

As noted previously, all neurodiversity-affirming eating disorder supports and services must consider the multiple ways in which neurodivergence influences feeding and eating experiences. This foundational understanding will facilitate enhanced individuation of eating disorder care by informing a holistic treatment formulation, design, and delivery, alongside appropriate adjuvant supports.

The problematic nature of ‘evidence-based’ as a construct in mental health

When referring to the construct of ‘evidence-based,’ it is imperative to take a critical stance in examining the quality of said evidence (see Bottema-Beutel, 2023; Sandbank et al., 2020; Flake & Fried, 2020; Scheel, Schijen, & Lakens, 2021; Kaplan et al., 2022; Sharma et al., 2021; Wilson, 2023; Huang et al., 2022; Read, Irving, & McGrath, 2021; Blease, 2013; Moncrieff et al., 2022;
Woodley, 2022) and whether or not said evidence is representative and inclusive of the individuals whom we are attempting to support (see Blair, 2023; Babb et al., 2022; Babb et al., 2021; Mandy, 2022; Camm-Crosbie et al., 2019; Payne et al., 2022; Totsika et al., 2022; Hinshaw, Littman, & Chronis-Tuscano, 2022; Champ, Adamou, & Tolchard, 2021).

Recent research centering the eating disorder treatment experiences of autistics with a restrictive eating disorder highlights how even dominant evidence-based treatment modalities may not be suitable to meet their unique needs. Indeed, Kinnaird et al. (2019) stated that “The findings suggest that this population experiences unique needs associated with their autism that are not being met by standard ED treatments”. Babb et al. (2022; 2021) reported that autistic patients experienced less benefit from traditional cognitive behavioural therapy (CBT) interventions compared to their neurotypical peers. The same autistic patients also reported dissatisfaction with dietetic services delivered as part of their eating disorder treatment (Babb et al., 2022; Babb et al., 2021), an experience shared by Elwyn in their lived experience account (2023). It is possible that the inability of traditional, evidence-based treatment modalities to meet the needs of neurodivergent patients reflects the fact that such interventions are grounded in neuronormative conceptualisations of eating (e.g., variety, spontaneity, social eating, intuitive eating) that are incongruent with neurodivergent eating experiences.

More broadly, research shows that treatments deemed evidence-based are not necessarily helpful, and sometimes harmful, for autistic people experiencing mental ill-health (Commonwealth of Australia, 2022; Lipinski et al., 2022; Brede et al., 2022; Mandy, 2022; Camm-Crosbie et al., 2019; CareQuality Commission, 2020). Indeed, Brede et al. (2022) wrote that their findings “show that currently, mental health services do not adequately support autistic adults, and can even cause additional harm” while Lipinski et al. (2022) stated that “the most-reported barriers to accessing treatment are therapists’ lack of knowledge and expertise surrounding autism, as well as unwillingness to treat autistic individuals.”

Considering the many shortcomings and failings of the most prevalent therapy frameworks in relation to marginalised communities (e.g., neurodivergent people, racial or ethnic minorities, Aboriginal and Torres Strait Islander people, LGBTQIA+ individuals) (Bretherton et al., 2021; Strauss et al., 2021; Wright et al., 2020; Price, Bruce, & Adinoff, 2022; Camm-Crosbie et al., 2019; Mandy, 2022; Lipinski et al., 2022; Brede et al., 2022), critical reflection on the meaning of ‘evidence-based’ and the ideological purposes it serves is essential to embrace a neurodiversity-affirming framework in both mental health research and clinical practice. Evidence-based, as a construct, should not serve to justify and legitimise the exclusion and further marginalisation of vulnerable individuals, including neurodivergent people, from accessing adequate care that meets their unique support needs, no matter how complex and potentially long-term these support needs may be (see Downs et al., 2023; Elwyn, 2023; Kapp, 2023).

**Autism-specific eating disorder treatment adaptations: What has been done?**

An autism-specific eating disorder care pathway has been developed in the United Kingdom (UK) in an effort to improve eating disorder treatment services for autistic patients (PEACE Pathway) (PEACE, n.d.). This care pathway recommends basic treatment adaptations relating to sensory and communication preferences, as well as providing information for patients and their carers (PEACE Pathway).

Feasibility research has supported the potential of cognitive remediation therapy (CRT) to facilitate increased cognitive flexibility and central coherence in autistic people with anorexia nervosa (Dandil, 2019). However, Saure et al. (2022) conducted a narrative review of CRT and cognitive remediation and emotion skill training (CREST) in patients with anorexia nervosa with high versus low autistic traits, and found that autistic patients affected by anorexia nervosa appeared to benefit less from all three modalities compared to patients with low autistic traits.
Autism-specific modifications have also been suggested for family-based interventions for anorexia nervosa that target increased focus on sensory processing differences, cognitive and behavioural factors, difficulties with social communication and interpersonal relationships, and emotional expression (Loomes & Bryant-Waugh, 2021), although these adaptations have not yet been tested empirically.

It is important to note that the aforementioned treatment adaptations do not explicitly consider the high co-occurrence rates between different forms of neurodivergence, especially autism and ADHD (see Hours, Recasens, & Bayete, 2022); and although they have been designed with the intent to support improved eating disorder treatment outcomes in autistic individuals, this does not automatically make them neurodiversity-affirming. For example, framing autistic people’s different ways of communicating and socialising as pathological and in need of fixing (e.g., social skills training) is inherently antithetical to the neurodiversity paradigm as it ignores a decade’s worth of research on the double empathy problem, minority stress, and the psychological risks associated with masking (see Cassidy et al., 2020; Crompton et al., 2020; South, Costa, & McMorris, 2021; Radulski, 2022; Milton, Gurbuz, & Lopez, 2022; Botha & Frost, 2020; Pearson & Rose, 2021; Bradley, Shaw, Baron-Cohen, & Cassidy, 2021). This is particularly important in the context of eating disorders, as some neurodivergent individuals report feeling as though masking has either contributed to the development of their eating disorder or that the eating disorder was a form of masking (e.g., losing weight as a means to increase social acceptance and prevent discrimination) (Zadow, 2022).

A Delphi study was conducted and the findings highlighted the urgency of improving care for autistic women with anorexia nervosa, particularly in relation to disentangling eating disorder related difficulties from autistic traits (Field et al., 2023). Indeed, the findings of the study are as follow: “The results highlight the need to distinguish between autism- and AN-related difficulties, accommodate autistic traits such as sensory sensitivities and communication differences, and ensure the autistic voice is present in both the development and delivery of care” (Field et al., 2023).

**Accessing NDIS funds for eating and feeding disorder support**

Australia’s National Disability Insurance Scheme (NDIS) delivers funding to approved participants to support their health and wellbeing needs. The remit of the NDIS is to fund appropriate support (e.g., allied health services) and equipment/consumables in relation to the individual’s disability and have been identified as appropriate to meet their individualised NDIS goals (NDIS, 2021).

The NDIS does not fund health-related services, that is, services that are attributed to a health condition (as opposed to a disability). As eating disorders are classified as a health condition, eating disorder supports are not funded under the NDIS (NDIS, 2022). However, drawing on the evidence presented in this report supporting the role of neurodivergence-related sensory processing and cognitive differences in the aetiology and maintenance of feeding and eating disorders (see Mayes & Zickgraf, 2019; Mathew et al., 2022; Saure et al., 2021), such a demarcation is questionable and has potential to limit equitable access to appropriate feeding and eating disorder care for neurodivergent individuals.

**Neurodiversity-affirming treatment considerations**

In addition to incorporating an understanding of the neurodivergent profile into individual assessments and interactions with neurodivergent patients affected by eating disorders, the following considerations are relevant.

1. **Neurodivergence-informed therapy**

Neurodivergence-informed therapy replaces an individual conceptualisation of disability with one which is relational and environmental, resists efforts directed towards normalisation, and focuses on
the flourishing of a positive neurodivergent sense of self (Chapman & Botha, 2022; Botha & Gillespie-Lynch, 2022).

2. **Quality of life**

Neurodivergent individuals may conceptualise quality of life differently to neurotypical people (see Elwyn, 2013; Chapman & Carel, 2022; Ferenc, Platos, Byrka, & Król, 2022; Williams & Gotham, 2021a; Caron et al., 2022; Agarwal et al., 2012; Downs et al., 2023). Therefore, it is important to ask neurodivergent people what they understand a good quality of life or a ‘life worth living’ means for them rather than making assumptions and generalisations using neuronormative standards.

3. **Demand avoidance**

Treatment adaptations are indicated when supporting a neurodivergent individual with an eating disorder who experiences demand avoidance or PDA. Directive language, compliance-based approaches, and interventions that have a high demand for engagement may be ineffective and even harmful (PDA Society, n.d.). Alternative approaches such as those which use indirect phrasing, encourage self-determination and autonomy, focus on reducing overall demands, and encourage connection with internal or intrinsic motivators are more likely to be acceptable.

4. **Psychological trauma**

Neurodiversity-affirming interventions must systematically be trauma-informed as autistic people and ADHDers are at increased risk of PTSD from incidents or events that may differ from those usually considered to be trauma triggers in neurotypical people (Heidel, 2022; Reuben, Self-Brown, & Vinoski, 2022; Rumball, Happé, & Grey, 2020; Kerns et al., 2022; Antshel et al., 2013; Bettin, 2022; Finch, 2021; Mantzalas et al., 2022). People with intellectual disability are also at an increased risk of experiencing psychological trauma, however no trauma-informed therapy framework exists that specifically addresses their unique support needs (Mevissen & de Jongh, 2010; McNally, Taggart, & Shevlin, 2021).

5. **Financial accessibility**

Due to neurodivergent people being disproportionately affected by financial inequity and employment discrimination (Harvery et al., 2021; Wen, van Rensburg, O’Neill, & Attwood, 2022; Gonzales, 2022; Praslova, 2021; Meltzer, Robinson, & Fisher, 2019; Michael, 2021; Arnold, Easteal, Easteal, & Rice, 2010), they may not always be able to access private community-based eating disorder care, even with Medicare subsidisation, signalling the need for affordable eating disorder care options that support equitable access across a range of intersectional considerations.

6. **Communication**

Whilst individual communication preferences of the neurodivergent individual are important to identify and accommodate, care should be taken to avoid making assumptions regarding an individual’s communication abilities and preferences.

Awareness of the double empathy problem (see Milton, 2012; Milton, Gurbuz, & Lopez, 2022; Crompton et al., 2020; Milton, Waldock, & Keates, 2023; Jellett & Flower, 2023; Sterman et al., 2022) is helpful to situate the responsibility for communication breakdowns as emerging from the interaction between the different parties, as opposed to being the sole responsibility of the neurodivergent individual.

Longer, or additional, consultations may be indicated, and/or an alternative method of communication employed. For example, an individual may prefer written communication, spoken
communication, digital communication (AAC), or a combination of those depending on contextual factors (e.g., situational mutism, anxiety, auditory speed processing).

Efforts should be made to identify individual preferences and clarify the meaning and intent of a neurodivergent person’s communication, and to clarify that they have understood clinicians’ communication too. For example, some autistic people, but not all, are literal and may find metaphors and euphemisms confusing. If the use of a metaphor or euphemism is necessary, it may be necessary to clarify the recipient’s comprehension, and where necessary, it should be clearly explained.

7. Sensory processing

An applied understanding of the wide ramifications associated with sensory processing differences is essential to incorporate into all aspects of eating disorder care: medical, mental health, allied health, alternative therapeutic supports, as well as adjusting the servicescape to meet individual needs.

Whilst all stakeholders are urged to consider the sensory needs of neurodivergent individuals, occupational therapists have the specialist clinical skills to support neurodivergent people to better understand how their sensory processing patterns influence their cognitive processes and mental states, and identify individualised ways to increase self-efficacy and overall wellbeing (see Clark & Nayar, 2012; Gardiner & Brown, 2010). Furthermore, dietitians and family members will also benefit from understanding the influence of sensory processing differences on the wellbeing of a neurodivergent person as well as appropriate ways to adapt eating environments, meal plans, and/or food offerings to accommodate the unique sensory profile of the neurodivergent individual receiving support.

8. Interoceptive confusion and alexithymia

Neurodivergent individuals may not express (speaking, body language, facial expressions) emotions and health-related distress (e.g., pain, discomfort, anxiety, sadness, malaise) in the same way as neurotypical individuals. Interoceptive confusion may make it difficult for neurodivergent people to locate pain within their own body, and alexithymia can influence the expression of feelings and emotions. Therefore, ethical care requires that if a neurodivergent individual indicates that they are in pain or feel unwell but their facial expression and/or body language does not necessarily reflect that, their testimony must be respected and acted upon to avoid medical gaslighting.

9. Pain threshold differences

Neurodivergent individuals may have unusually low or high pain thresholds due to interoceptive confusion. This has implications for help-seeking behaviours, including ways of explaining feelings of pain and/or discomfort. Health professionals should investigate all health-related suspicions regardless of pain expression, reporting, and body language.

10. Stimming

Lived experience accounts of neurodivergent individuals with eating disorders have identified that their stims have been misunderstand as eating disorder behaviours and therefore restricted as part of their treatment, contributing to dysregulation, sensory overwhelm, and increased anxiety.

Disentangling adaptive and self-regulatory stimming behaviours from maladaptive eating disorder symptoms warrants careful assessment and evaluation. If assessed as being functional neurodivergence-related adaptations, neurodiversity-affirming practice supports that stims are permitted (Kapp et al., 2019) and only addressed if there are medical concerns (e.g., energy expenditure) or the stim is self-injurious and unsafe (e.g., head banging).
11. **Routines and executive functioning**

Autistic people may need more time to adapt to changing situations and circumstances and switching tasks (Buckle, Leadbitter, Poliakoff, & Gowen, 2021). Therefore, providing as many details and information as early as possible is important as it can serve to assist in managing anxiety.

Some neurodivergent people may also need more time to process spoken information and respond to questions due to auditory processing speed differences. Allowing time for neurodivergent people to respond to questions without rushing is critical.

Additionally, ADHDers and AuDHDers may experience difficulty with task initiation, focus, memory, and concentration. Health practitioners can demonstrate neurodiversity-affirming care by being patient, compassionate, and embracing a non-shaming or judgmental attitude in their interactions and by proactively offering accommodations.

12. **Dyslexia and dysgraphia**

Dyslexia and dysgraphia can impact treatment experience and should be taken into consideration when sharing written resources or asking for the neurodivergent patient to engage in writing activities. Oftentimes, people with dyslexia feel a lot of shame (Boyes et al., 2020) trauma, and have low self-esteem (Terras, Thompson, & Minnis, 2009) because of being told they were not ‘good enough’ and should ‘try harder’ instead of being met with compassion, understanding, and accommodation. Research shows that dyslexia is sometimes connected with visuo-spatial thinking abilities (Bacon & Handley, 2010) and creativity (Masterson, 2022). Therefore, art therapy may potentially be well-suited in this context although more research is warranted (see Bacon & Bennett, 2013).

13. **LGBTQIA+ affirming care**

There is a prominent intersection between the neurodivergent and LGBTQIA+ communities as being neurodivergent is positively correlated with gender and sexual diversity (Maroney & Horne, 2022). Hence, neurodiversity-affirming eating disorder care must also embrace a gender-affirming approach. This involves challenging simultaneously both neuronormativity and heteronormativity.

14. **Neurodivergent-led peer support**

Neurodivergent eating disorder peer support opportunities offer potential as a treatment adjunct to help foster a sense of belongingness and positive neurodivergent identity amongst neurodivergent individuals with lived or living experience of eating disorders.

Ideally, a neurodivergent-led eating disorder peer support program should be developed in collaboration with neurodivergent-led organisations. Existing peer mentoring programs such as the Butterfly Collective might also be a good resource for those seeking eating disorder lived experience-led initiatives (Butterfly Collective, n.d.).
Research considerations:

- Co-designed and participatory feeding and eating disorder research across all stages of care that is grounded by researchers’ epistemic humility exploring the needs and experiences of neurodivergent patients is urgently needed.

- Quality of life measures should be salient to the neurodivergent lived experience.

- Research exploring neurodiversity-affirming adaptations to dietetic and psychological care pathways are required.

- Research exploring the potential of neurodivergent peer support to facilitate the development of a positive neurodivergent identity amongst neurodivergent patients is required.

- Research must assess for, identify, and transparently report all harms and adverse effects of interventions that occur to the individual receiving support or intervention, and their families and carers involved in their support.

Practice and service considerations:

- Cultural and epistemic humility and empathy are essential to prevent the perpetuation of medical gaslighting and iatrogenic harm in eating disorder practice.

- Consideration must be given to the different feeding and eating experiences reported by neurodivergent people, and the importance of challenging neuronormative feeding and eating assumptions.

- Neurodivergent individuals are at increased risk of facing financial barriers to accessing eating disorder care and affordable services are required.

- If a patient engaged in community-based treatment has not yet been screened for neurodivergence, this screening should be made a priority to ensure the delivery of appropriate neurodiversity-affirming care.

- A person-centered (humanistic) treatment formulation will consider an individual’s sensory profile, masking (camouflaging), executive function, communication preferences, cognitive abilities, gender identity, sexual orientation, ethnic and/or racial background, and co-occurring health and/or mental health conditions (see Rubin & Humphreys, 2016; Buhler, 1971; Clay, 2002).

- All neurodivergent individuals should be provided access to neurodiversity-affirming services to support them to meet their health and well-being goals whilst fostering the development of a positive neurodivergent identity.

- Consideration should be given to including feeding and eating disorder supports on the National Disability Insurance Scheme (NDIS) for neurodivergent individuals.

- Sensory processing differences should be assessed, accommodations identified, and supports put in place by an occupational therapist and other relevant stakeholders.

- Communication preferences and abilities must be acknowledged and accommodated throughout treatment.

- Behavioural interventions such as ABA and other behavioural approaches rooted in operant conditioning (e.g., positive behaviour support [PBS], contingency management strategies) as well as systematic desensitisation interventions are not acceptable for
autistic people because a) the so-called evidence related to these practices is of poor quality and reliability (Bottema-Beutel, 2023; Bottema-Beutel & Crowley, 2021; Sandbank et al., 2020; Tsiplova et al., 2022; Rodgers et al., 2020; Hassiotis et al., 2018), and b) these practices are associated with a significant risk of harm such as psychological trauma, learned helplessness, masking, and burnout (McGill & Robinson, 2021; Shkedy, Shkedy, & Sandoval-Norton, 2021; Sandoval-Norton, Shkedy, & Shkedy, 2019; Kupferstein, 2018; Anderson, 2022; Dawson & Fletcher-Watson, 2021; Wilkenfeld & McCarthy, 2020; Johnston et al., 2006; Cernius, 2022; Lynch, 2019b; Sterman et al., 2022; Kohn, 2020; Autistic Science Person, 2022; South, Costa, & McMorris, 2021; Autistic Strategies Network, 2019; Autistic Self-Advocates Against ABA, n.d.).

Community-based intensive and hospital treatment

Overview

The research and practice considerations noted above for community treatment also apply to community intensive and hospital services. In addition, the following considerations are relevant to incorporate for optimal neurodiversity-affirming practice.

Multidisciplinary care

Given the overarching role of sensory processing in neurodivergence (Holmans, 2022; Dellapianza et al., 2021; Sanz-Cervera et al., 2017; Hahn, Foxe, & Molholm, 2014; Hilton & Ratcliff, 2022; Mulligan, Douglas, Armstrong, 2021; Gere, Capps, Mitchell, & Grubbs, 2009) and eating disorder pathophysiology (Riva & Dakanalis, 2018; Riva & Gaudio, 2018; Bell, Coulthard, & Wildbur, 2017; Nimbley et al., 2022; Herbert, 2017), the multidisciplinary team will benefit from engaging in professional development on sensory processing in relation to neurodivergence and other co-occurring conditions to guide general accommodations that reduce the risk of inadvertently creating aversive sensory experiences. Occupational therapists are well placed to guide appropriate sensory accommodations and supports and ideally, neurodivergent patients should be offered one-on-one sessions (in preference to group-based sessions) with an occupational therapist on a regular basis. Kornblau and Robertson (2021) noted that: “supported by occupational therapy, the occupation of health management can help autistic adults meet long-term needs for mental and physical health, quality of life, and well-being” while Adamou et al. (2021) stated that: “occupational therapists can deploy their unique skills in providing specialist interventions for adults with ADHD.”

Sensory-based considerations and restraint

Sensory-based considerations

Individual sensory profile assessments (e.g., GSQ, ISO, PAQ) mentioned in the Initial response section should be used to develop a holistic and person-centred treatment formulation. It is important to remember that autistic people do not habituate in the same manner as neurotypical people to sensory stimuli (Jamal et al., 2021) and therefore forced exposure to overwhelming sensory stimuli can contribute to sensory trauma and anxiety, learned helplessness, as well as distressing sensory meltdowns and shutdowns (Lewis & Stevens, 2023; Kerns et al., 2022; Verhulst & MacLennan, 2022; Heidel, 2022; Belek, 2018; Phung, Penner, Pirlot, & Welch, 2021; Phung, Penner, Pirlot, & Welch, 2021). Therefore, reasonable adjustments should be made to accommodate neurodivergent people’s sensory needs. For example, environmental accommodations may include eating alone, dimmed lights, use of noise reduction equipment (e.g., noise cancelling headphones, earplugs), using visual distractions (e.g., watching series or documentaries on a tablet or phone).
Restraint

Sensory meltdowns and shutdowns may increase the incidence of restraint episodes which are traumatic for all involved, including members of staff. Research has shown that accommodating patients’ sensory needs in mental health units decreases the number of restraint episodes, which benefits both patients and staff (Chalmers et al., 2012; Björkdahl, Perseius, Samuelsson, & Lindberg, 2016; Hedlund Lindberg, Samuelsson, Perseius, & Björkdahl, 2019; Wiglesworth & Farnworth, 2016; CareQuality Commission, 2020) - including for autistic people (Williams, Corbyn, & Hart, 2023). We, the authors of this report, therefore, strongly recommend the implementation of co-designed sensory rooms in intensive community-based and inpatient treatment facilities.

In order to reduce the incidence of sensory meltdowns and shutdowns, the authors of this report, one of whom has lived experience of inpatient restraint, recommend that a mitigation plan be developed upon patient admission. A lived experience-informed example framework for a mitigation plan is included below.

Exemplar framework for a sensory meltdown and shutdown mitigation plan:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Make a list of sensory triggers (e.g., smells, sounds, colours, lights, texture).</td>
</tr>
<tr>
<td>2.</td>
<td>Ask the neurodivergent person what accommodations they need (e.g., eating alone, no or limited group-based sessions, dimmed lights, quiet time). Make sure they have access to noise-cancelling equipment if needed (e.g., headset, earplugs).</td>
</tr>
</tbody>
</table>
| 3.   | Make a plan with the neurodivergent person about what to do when they feel overwhelmed or understimulated:  
  • reach out to a nurse and explain what is happening  
  • ask the nurse what is needed to mitigate risks of meltdown or shutdown (e.g., go to a dark and quiet room, get a weighted blanket, sensory toys) |
| 4.   | Ask the neurodivergent person what it feels like for them when they are experiencing sensory overload or sensory understimulation:  
  • raised heart rate  
  • sweating  
  • light-headedness  
  • headache  
  • restlessness  
  • tensed muscles  
  • faster breathing  
  • generalised anxiety  
  • nausea  
  • feeling irritated |
| 5.   | Ask the neurodivergent person what the outward signs are of sensory overwhelm or understimulation so that the nurses can more easily notice, check what is going on, and take action before the situation escalates:  
  • hand flapping  
  • skin or nail picking  
  • pacing  
  • head tilting |
6. Ask the neurodivergent person what happens when they do experience a sensory meltdown or shutdown:

- lashing out (verbally or physically)
- screaming
- head banging
- hand/arm biting
- catatonia
- dissociation
- absconding
- situational mutism

7. Ask the neurodivergent person what helps them when experiencing a sensory meltdown or shutdown.

Inform the neurodivergent person, in a non-threatening manner, that if they engage in self-harming behaviours during a meltdown (e.g., head banging, arm/hand biting), they may have to be restrained for their own safety. Make sure to emphasise that this is not undertaken with a punitive intent. Provide an explanation about what restraint entails (manual, mechanical, chemical) and how it is conducted if the neurodivergent patient enquires about it.

8. Ask the neurodivergent person what they need after the meltdown or shutdown has resolved:

- have a chat
- be left alone
- quiet room
- dimmed lights
- take a shower
- weighted blanket
- heated pads
- cup of tea/hot chocolate/coffee (if medically safe).

Remember that meltdowns and shutdowns are not to be conflated with ‘misbehaviours’ or ‘tantrums.’ Meltdowns and shutdowns are not ‘attention-seeking’ behaviours, they are fight or flight responses resulting from an overwhelmed nervous system and indicating extreme distress. A neurodivergent person has limited to no conscious control over their behaviours when experiencing a meltdown or shutdown (Lewis & Stevens, 2023).

**Enteral nutrition**

If the insertion of a nasogastric tube is necessary for medical resuscitation purposes, allowing the neurodivergent person to be in a sensory safe environment (e.g., dimmed lighting, quiet) during the procedure may be beneficial and reduce distress. The insertion of a nasogastric tube can be extremely overwhelming from a sensory perspective (e.g., touch, taste, interoceptive discomfort and/or pain) and minimising environmental stressors may mitigate its anxiogenic nature for the neurodivergent patient.
While our focus here is on neurodivergent individuals, a study conducted by Fuller, Tan, and Nicholls (2023) suggested that such anticipatory and/or mitigating measures could also likely be of benefit to all patients receiving inpatient treatment for an eating disorder involving nasogastric feeding under restraint, regardless of neurotype.

**Mitigating and repairing distress post-restraint**

Restraint episodes can have long-lasting psychological sequelae (Frueh et al., 2005; Sacks-Jones, 2017; Chieze, Hurst, Kaiser, & Sentissi, 2019; CareQuality Commission, 2020), and particularly so for neurodivergent individuals who are shown to be at an increased risk of suffering from trauma-related psychological distress, including from events or triggers not currently reflected in diagnostic tools (see Rumball, Happe, & Grey, 2020; Kerns et al., 2022; Adler et al., 2004; Brattberg, 2006). Thus, it is important to offer an opportunity for them to safely talk about the incident and help them process what has happened after it has taken place (i.e., non-judgmental and compassionate debrief).
PART 6: Recovery support
Part 6: Recovery support

Overview

Recovery in relation to feeding and eating disorders is understood in many different ways. Here, we use the word recovery to give context to services that are recovery-focused. Recovery-focused services include peer support and other therapeutic adjuncts aimed at reducing the risk of relapse and maintaining ongoing recovery.

Recovery-focused services need to incorporate a deep understanding of, and respect for, the ways in which neurodivergence influences feeding and eating, and the broader life-world experiences of individuals, whilst also promoting the importance of a positive neurodivergent identity. As such, the unique support needs of each individual that are indicated to maintain wellbeing and quality of life must be identified, validated, and incorporated into relapse prevention. Epistemic humility, in this context, is of prime importance.

Fostering a positive neurodivergent identity

Allowing neurodivergent people to be authentically themselves and celebrate their neurodivergent identity in a positive and strengths-based manner rather than focusing on deficits and the unrealistic and harmful pursuit of hegemonic normalcy, or neurotypicality, is important as it has been associated with increased wellbeing (see Taylor et al., 2023; Sedgwick, Merwood, & Asheron, 2019; Pellicano et al., 2022; Cooper, Cooper, Russell, & Smith, 2021; Cooper, Russell, Lei, & Smith, 2022; Bertilsdotter Rosqvist et al., 2022; Bertilsdotter Rosqvist, Hultman, & Hallqvist, 2022; Schippers et al., 2022; Blair, 2022; Umucu et al., 2022; Shaw et al., 2021; Davies, 2022).

Phenomenological research with adults identified as autistic in adulthood suggests that whilst identification led to a complex range of emotions, it often included a sense of relief at having a framework that facilitates the reinterpretation of past experiences with a greater degree of self-compassion and self-acceptance (Gellini & Marczak, 2023). Similarly, qualitative research involving autistic adults with experience of restrictive eating disorders suggests that being identified as autistic facilitates a reframe of eating disorder experiences, validating understanding of certain eating behaviours as being related to autism as opposed to the eating disorder (Babb et al., 2021; Brede et al., 2020), and has been reported to increase self-esteem (Brede et al., 2020).

The authors propose that supporting neurodivergent individuals who have lived or living experience of an eating disorder to develop a positive neurodivergent identity, connect with neurodivergent peers, and understand the ways in which being neurodivergent influenced, and continues to influence, their eating experiences, is an important component of not only treatment, but of recovery-focused supports and care.

Understanding of recovery

As stated above, recovery from an eating disorder can mean different things for different people (see Kenny & Lewis, 2021; van Rensburg, 2021; Downs et al., 2023; Blair, 2023). Neurodivergence is a key factor in how an individual may envision what a ‘life worth living’ entails and, as such, respecting neurodivergent people’s understanding and conceptualisation of recovery and quality of life is paramount.

A strictly dichotomous conceptualisation of recovery (i.e., recovered versus not recovered) may not be realistic nor helpful within the context of disability and/or chronic illness, and may prove harmful (see Chapman, 2020). This was highlighted in Elwyn’s work (2023): “when a clinician took the approach of valuing my humanity, wishes, quality and meaning of my life above a clinical recovery and further inpatient treatments, it had the effect of increasing my quality and meaning of life.”
Epistemic humility demands that we seek out and respect each neurodivergent person’s framing of recovery and quality of life in order to better design and deliver neurodiversity-affirming ongoing recovery support.

**Animal-assisted and music therapies**

Emerging research suggests that autistic people may find animal-assisted therapy (AAT) helpful as an adjunctive therapy. Reported benefits of AAT include increased self-acceptance and overall emotional wellbeing (Ang & McDougall, 2022). AAT is also reported to decrease stress and anxiety for autistic people (Wijker et al., 2021). In Australia, autistic self-advocate Summer Farrelly specialises in AAT for autistic people, with a focus on chickens, and offers many insights and suggestions on their website.

Similarly, there is emerging evidence suggesting that autistic people (Sharda et al., 2019) as well as ADHDers (Kasuya-Ueba, Zhao, & Toichi, 2020) may benefit from music therapy. Reported benefits include sensory-motor regulation, improved focus, enhanced self-esteem, and emotional self-soothing (Bharathi, Jayaramayya, Balasubramanian, & Vellingiri, 2019; Sholeh & Supena, 2021).

**Neurodivergent-led peer support**

Many neurodivergent people feel alienated and isolated due to social exclusion and systemic discrimination (Pearson, Rees, & Forster, 2022; Weiss & Fardella, 2018). Engaging with other neurodivergent individuals can support feelings of belongingness and self-acceptance (e.g., shared cultural values, mutual understanding of subjective experiences) and may therefore contribute to the maintenance of recovery through improved self-esteem, self-efficacy, and relational wellbeing (see Botha, Dibb, & Frost, 2022a; Halleröd, Anckarsäter, Råstam, & Scherman, 2015; Bettin, 2022).

**Neurodivergent-led organisations**

There are several options available for neurodiversity-affirming peer support in Australia:

1. Eating Disorders Neurodiversity Australia (EDNA)
2. Autistic Self-Advocacy Network (Australia & New Zealand)
3. Yellow Ladybugs
4. Reframing Autism
5. The Autistic Realm Australia
6. I Can Network

There are also options for neurodivergent clinicians and researchers (or neurotypicals with an interest in neurodiversity-affirming care) to connect:

1. Australian Neurodiversity Affirming Health Professionals
2. Neurodivergent Professional Network
3. Autistic Doctors International
Appendix A: Abbreviations

AAC: Augmentative and Alternative Communication
AAT: Animal-Assisted Therapy
ABA: Applied Behaviour Analysis
ADC: Adult Developmental Co-ordination Disorders/Dyspraxia Checklist
ADHD/C: Attention Deficit/Hyperactivity Disorder/Condition
AEQ: Aut-Eat Questionnaire
AFAB: Assigned Female at Birth
AMAB: Assigned Male at Birth
AN: Anorexia Nervosa
APA: American Psychiatric Association
APD: Accredited Practicing Dietitian
ARFID: Avoidant Restrictive Food Intake Disorder
ASMR: Autonomous Sensory Meridian Response
ASPS: Adult Sensory Processing Scale
ASRS-5: Adult ADHD Self-Report Screening
BD: Bipolar Disorder
BED: Binge Eating Disorder
BVAQ: Bermond–Vorst Alexithymia Questionnaire
BN: Bulimia Nervosa
BPD: Borderline Personality Disorder
BRIEF-A: Behavior Rating Inventory of Executive Function–Adult
CAT-Q: Camouflaging Autistic Traits Questionnaire
CBT: Cognitive Behaviour Therapy
CFS: Chronic Fatigue Syndrome
C-PTSD: Complex Post-Traumatic Stress Disorder
CREST: Cognitive Remediation and Emotion Skill Training
CRH: Corticotropin-Releasing Hormone
CRT: Cognitive Remediation Therapy
DA: Dopamine
DBT: Dialectical Behaviour Therapy
EAT-26: Eating Attitude Test
ECT: Electroconvulsive Therapy
ED: Eating Disorder
EDA-QA: Extreme Demand Avoidance Questionnaire for Adults
EDE-Q: Eating Disorder Examination Questionnaire
EDE-QS: Eating Disorder Examination Questionnaire Short
EDI: Eating Disorder Inventory
EDNOS: Eating Disorder Not Otherwise Specified
EUPD: Emotionally Unstable Personality Disorder (see Borderline Personality Disorder, BPD)
FASENS: Family Accommodation Scale for Sensory Over-Responsivity
FBT: Family-Based Treatment
GABA: Gamma-Aminobutyric Acid
GAD: Generalised Anxiety Disorder
GAFS-8: General Alexithymia Factor Score
GERD: Gastroesophageal Reflux Disease
GI: Gastrointestinal
GSQ: Glasgow Sensory Questionnaire
hEDS: hypermobile Ehlers-Danlos Syndrome
IBS: Irritable Bowel Syndrome
ICAR: International Cognitive Ability Resource
ID/LD: Intellectual Disability/Learning Disability
IL: Interleukin
ISQ: Interoception Sensory Questionnaire
ITSP: Infant/Toddler Sensory Profile
LGBTQIA: Lesbian, Gay, Bisexual, Transgender, Queer (Questioning), Intersex, Asexual (Agender)
MAIA: Multidimensional Assessment of Interoceptive Awareness
MCAS/D: Mast Cell Activation Syndrome/Disorder
ME: Myalgic Encephalomyelitis
ND: Neurodivergent or Neurodistinct
NDA: Neurodiversity-Affirming
NDIS: National Disability Insurance Scheme
NEDC: National Eating Disorder Collaboration
NIAS: Nine Item ARFID Screening
NSSI: Non-Suicidal Self-Injury
OCD: Obsessive Compulsive Disorder
OSFED: Other Specified Feeding and Eating Disorder
PAQ: Perth Alexithymia Questionnaire
PBS: Positive Behaviour Support
PCOS: Polycystic Ovarian Syndrome
PD: Personality Disorder
PDA: Pathological Demand Avoidance/Pervasive Drive for Autonomy
PNI: Psychoneuroimmunology
POTS: Postural Orthostatic Tachycardia Syndrome
PTSD: Post-Traumatic Stress Disorder
RAADS-14: Ritvo Autism and Asperger Diagnostic Scale
RCP: Royal College of Psychiatrists (UK)
RANZCP: The Royal Australian and New Zealand College of Psychiatrists
RSD: Rejection Sensitive Dysphoria
SBQ: Sensory Behavior Questionnaire
SEQ: Sensory Experiences Questionnaire
SIDAS-M: The Suicidal Ideation Attributes Scale-Modified
SIMS: Special Interest Motivation Scale
SIPT: Sensory Integration and Praxis Tests
SP2: Sensory Profile 2
SPQ: Sensory Perception Quotient
SPSA: Sensory Processing Scale Assessment
SPSI: Sensory Processing Scale Inventory
SPSQ: Sensory Processing Sensitivity Questionnaire
SPSRC: Sensory Processing and Self-Regulation Checklist
SRS: Sensory Rating Scale
SWEAA: SWedish Eating Assessment for Autism
THISQ: Three-domain interoceptive sensations questionnaire
TIMSC: Theory of Immune-Mediated Sensory Cognition
TNF-a: Tumor Necrosis Factor alpha
TS: Tourette’s Syndrome
UFED: Unspecified Feeding and Eating Disorders
UK: United Kingdom
USA: United States of America
YAA-R: York Adult Assessment-Revised
Appendix B: Cobbaert’s Theory of Immune-Mediated Sensory Cognition (TIMSC)
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