A Conceptual Model of Risk and Protective Factors for Autistic Burnout

Running title: A Conceptual Model of Autistic Burnout

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Lay Summary

Although many autistic people describe experiencing autistic burnout, there has been little research on this topic. Based on descriptions of autistic peoples' lived experiences, we developed a conceptual model to explore how various risk and protective factors may interact to contribute to, or prevent, autistic burnout.

Abstract

Early qualitative research indicates that autistic burnout is commonly experienced by autistic people and is associated with significant, negative consequences for their mental health, wellbeing, and quality of life, including suicidality. Findings to date suggest that factors associated with being autistic and the widespread lack of autism awareness and acceptance within society contribute to the onset and recurrence of autistic burnout. Based on autistic adults' descriptions of their lived experiences, a Conceptual Model of Autistic Burnout (CMAB) is proposed, which describes a series of hypothesised relationships between identified risk and protective factors that may contribute to, or buffer against, autistic burnout. The theoretical framework for the CMAB is based on the Social-Relational model of disability and neurodiversity paradigm, and the Job Demands-Resources model of burnout, and Conservation of Resources theory. The CMAB offers a holistic perspective for understanding individual, social, and environmental factors that can influence autistic burnout via various direct and indirect pathways. Autistic burnout research is in its infancy and the CMAB provides a foundation for future investigations about this condition.

Keywords: Autism, burnout, autistic burnout, Job Demands-Resources model, Conservation of Resources theory, Social-Relational model, neurodiversity.

'Burnout' occurs when an individual's coping capacity has been exceeded, with the term originally used to describe a loss of motivation and fatigue in employees within people-centred professions (Schaufeli & Greenglass, 2001). It has since been expanded to explore these symptoms in other populations including athletes and parents (Gustafsson, Kentta, & Hassmen, 2011; Mikolajczak and Roskam, 2018). According to the dominant theory, the core characteristics of burnout are exhaustion, depersonalisation and reduced personal accomplishment (Maslach & Jackson, 1981).

The term 'autistic burnout' has long been used by members of the autistic community to describe the negative consequences of living in a predominately non-autistic world. Despite myriad anecdotal accounts online, research into autistic burnout is relatively new. To date, only a few qualitative studies have sought to define autistic burnout and understand its core features by examining the lived experiences of autistic adults (Higgins et al., 2021; Mantzalas, Richdale, Adikari, Lowe, & Dissanayake, 2021; Raymaker et al., 2020). Their findings validate first-person reports and characterise autistic burnout as long-term mental, physical, and emotional exhaustion that builds over time, often recurring after stressful life events or transitions. Common features of autistic burnout include impaired cognitive function, the loss of previously acquired skills (e.g., self-care or speech), social and sensory withdrawal, and a marked increase in observable autistic traits (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020). Factors including 'masking' autistic traits, stressful life events, and alexithymia contribute to autistic burnout, as do stigma and discrimination against autistic people. In contrast, energy management, social support, stimming, and good self-awareness can be protective (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020). Findings suggest that autistic burnout can severely impact the mental health, quality of life and wellbeing of autistic people. Thus, it is vital to learn more

about potential risk and protective factors. Based on the current literature, we propose a conceptual model to better understand the factors underlying autistic burnout.

Theoretical Framework

The theoretical framework proposed for the model is based on two disability theories: the Social-Relational Model of disability ([S-RM]; Simpson, McMillan, & Reeve, 2013; Thomas, 2004), and the neurodiversity paradigm (Kapp, 2020), and two theories of burnout and stress: the Job Demands-Resources model ([JD-R]; Bakker, Demerouti, & Verbeke, 2004; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and Conservation of Resources theory ([COR]; Hobfoll, 1989).

Models of Disability

Within the medical model of disability, autism is viewed through a deficit-based lens. Diagnostic criteria for autism (e.g., restricted and repetitive behaviours; American Psychiatric Association [APA], 2013) are pathologized and treatments often aim to reduce or extinguish 'undesirable' or observable autistic traits. The social model of disability, on the other hand, posits that disability arises from external factors that limit people's participation in society (Oliver, 2013). The S-RM bridges these perspectives, conceptualising disability as a form of social oppression dependent on the relationship between an individual's 'impairments' *and* social and environmental influences (Simpson et al., 2013). While aspects of a person's condition may restrict their activity, *disability* is socially imposed. Disability may be 'structural' or 'psycho-emotional' and affect an individual's activity and psychological or emotional wellbeing (Simpson et al., 2013; Thomas, 2004). Whereas structural disablism is caused by exclusionary factors in the environment (e.g., access to employment or information, and physical access to buildings), psycho-emotional disablism is an internal form of oppression that can indirectly or directly contribute to exclusion (Reeve, 2014).

Exclusion by *indirect* psycho-emotional disablism stems from structural reminders that individuals with disabilities are different, leading to embarrassment and preventing them from using services or facilities (e.g., accessing a building via a hidden entrance or a supermarket's designated 'quiet hour'). On the other hand, *direct* psycho-emotional disablism comes from an individual's relationships with their families, friends, professionals, strangers, and themselves. Being stared at, called names, infantilised, ignored, and narratives about curing disabilities can lead to lower self-esteem and self-worth, and subsequent social withdrawal (Reeve, 2014). These experiences can contribute to internalised oppression where individuals try to pass as 'normal' or overcompensate to achieve above expectations, both of which can be physically and emotionally exhausting. Individuals who internalise negative messages about disability may subconsciously exclude themselves from normative life experiences (e.g., marriage or having children; Reeve, 2014).

Autism is a heterogeneous condition with a wide range of traits and support needs, some of which are challenging and can limit social participation. For example, sensory and social-communication differences may limit social connectedness. Furthermore, autistic people often report co-occurring conditions such as sleep problems (Jovevska et al., 2020), epilepsy (Lukmanji et al., 2019) and psychiatric conditions (APA, 2013) which can further limit social participation. Existing social, medical, cultural, and economic barriers can compound these difficulties and contribute to disability. Examples of structural disablement include a lack of low-sensory spaces in workplaces or shopping centres, which may prevent autistic individuals retaining employment or purchasing essential items. Similarly, noisy, or brightly lit waiting rooms may prevent autistic people seeking healthcare. Autistic people are a minority group who experience marginalisation, negative stereotyping and poor awareness about the diversity of autism characteristics (Botha & Frost, 2020; Cage, Di Monaco, & Newell, 2019; Sarrett, 2016), which can contribute to internalised stigma and psycho-

emotional disablement. For example, if autistic people feel like a burden, or unworthy of reasonable accommodations, this can restrict their participation in work, study, or social interactions.

Challenging the medical model's focus on cure and societal stigma about people with neurodiverse conditions (e.g., autism, attention deficit hyperactivity disorder, Tourette's syndrome), the neurodiversity paradigm adopts a strengths-based lens with acknowledgment that aspects of these conditions can be challenging and disabling (Kapp, Gillespie-Lynch, Sherman, & Hutman, 2012; Silberman, 2015), particularly when needs are not supported. Neurodiversity is an advocacy movement that supports the inclusion and acceptance of neurodivergent people and views autism as a natural form of human variation with inherent strengths rather than a collection of deficits that should be eliminated (den Houting, 2019; Kapp et al., 2012). Positive representation of neurodivergent conditions can help combat the direct and indirect psycho-emotional disablement experienced by autistic people by reframing stereotypical views about autism and emphasising participation, self-acceptance, self-advocacy, and inclusion.

Theories of Burnout and Stress

The JD-R is a theory of workplace stress that classifies work attributes as either demands or resources. Job demands require physical or cognitive effort that may lead to physical or psychological costs over time, whereas job resources can offset the costs associated with job demands and are experienced as fulfilling or rewarding. According to the JD-R, exhaustion and burnout can occur if job demands consistently exceed job resources (Bakker et al., 2004; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). A core assumption of the JD-R is that resources act as a buffer between demands and exhaustion; however, COR theory posits that this relationship is not always straightforward.

Fundamentally, COR theory is a motivation model based on the premise that individuals strive to acquire, protect, and replenish resources. Stress and burnout may occur if an individual's investment in resources (e.g., time) does not produce expected returns (Hobfoll, 1989; Hobfoll & Freedy, 2017). Resources are objects, conditions, personal qualities, and energies that are intrinsically valued, or which facilitate the acquisition of other valued resources (e.g., education, money, self-esteem). Resource loss can trigger 'loss spirals' that lead to further resource losses. For example, depleted energy (resource) may prevent an autistic individual engaging with their special interests (resource) which could, in turn, reduce their mental wellbeing (resource). Additionally, the effort associated with acquiring and maintaining some resources can outweigh their protective, buffering effect (Hobfoll & Freedy, 2017).

The Conceptual Model

Guided by the disability and stress models, we developed the Conceptual Model of Autistic Burnout ([CMAB]; Figure 1) to explore the direct and indirect relationships among categories of measurable variables including demands and resources, mental strain and wellbeing, demographics, and social and environmental factors, and their potential influence on autistic burnout. The selection of model variables was informed by the current literature about autistic burnout (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020) and the mental health and wellbeing of autistic adults (Lai et al., 2019).

Further, an Advisory Group of four autistic adults with lived experience of autistic burnout reviewed the model and endorsed the relevance of the chosen variables and hypothesised relationships. This group comprised three autistic females and one autistic male, over 18 years, who had all received a late autism diagnosis. The CMAB incorporates demands and resources that may influence the onset of autistic burnout directly, or indirectly

via the intermediate factors of mental health and wellbeing. The CMAB also integrates the impact of loss spirals described in COR theory.

INSERT FIGURE 1 HERE

Based on the CMAB, fourteen positive and negative relationships are hypothesised (Table 1). The rationale for the inclusion of the variables in the CMAB is discussed in the next section.

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Risk and Protective Factors for Autistic Burnout

Personal Demands

Autistic Traits

Autism is a heterogeneous condition where, in the absence of robust biological markers, diagnosis is based on observable behavioural traits including social-communication difficulties, repetitive and restricted behaviours, and sensory issues (APA, 2013). Research suggests that elevated autistic traits are associated with negative social and mental health outcomes including a greater risk of bullying among autistic children (Rai et al., 2018), and a higher incidence of abuse and trauma throughout the lifespan (Roberts, Koenen, Lyall, Robinson, & Weisskopf, 2015). Among autistic adults, autistic traits may contribute to suicidality (Pelton & Cassidy, 2017), depression (Hedley, Uljarević, Foley, Richdale, & Trollor, 2018; Rai et al., 2018) and dissatisfaction with social support (Hedley et al., 2018). Conversely, fewer autistic traits are associated with fewer negative life events (Griffiths et al., 2019). During periods of autistic burnout, adults report feeling ‘more autistic’ and commonly experience the loss of previously acquired skills (e.g., self-care and speech), greater sensory sensitivities and increased social communication difficulties (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020).

Studies examining the influence of autistic traits on mental health often report total scores on validated measures (e.g., the Autism Spectrum Quotient; Baron-Cohen, Wheelwright, Skinner, Martin, & Clubley, 2001). It has been suggested, however, that examining subscale scores could identify nuances in the relationship between individual autistic traits and mental wellbeing (Stimpson, Hull, & Mandy, 2021). Using the Broad Autism Phenotype Questionnaire (Hurley, Losh, Parlier, Reznick, & Piven, 2007), which measures sub-clinical autistic traits and produces both a total and three subscale scores, Stimpson et al. (2021) found that 'aloofness' was the only significant predictor of mental wellbeing among adults in a non-clinical sample. Similarly, the core autism traits of social communication difficulties and insistence on sameness have been associated with depression and suicidal ideation (Hedley, Ujarević, Cai, Bury, Stokes, & Evans, 2021). Thus, the CMAB includes the broad category 'autistic traits', to assess their general impact on mental strain, wellbeing, and autistic burnout, but also considers the impact of individual traits such as sensory sensitivities and special interests, which may influence the development of autistic burnout, positively or negatively.

Masking/Camouflaging

According to autistic adults, the effort of masking (or camouflaging) their autistic traits is exhausting and is a prominent risk factor for autistic burnout (Higgins, et al., 2021; Mantzalas et al., 2021; Miller, Rees, & Pearson, 2021; Raymaker et al., 2020). Masking can be understood as the "conscious or unconscious suppression of natural responses and adoption of alternatives across a range of domains including social interaction, sensory experience, cognition, movement, and behaviour" (Pearson & Rose, 2021, p.53). Although the terms are often used interchangeably, Hull et al. (2017) differentiate between three types of camouflaging strategies: ‘compensation’ (e.g., pretending to make eye contact), ‘masking’ (e.g., using pre-prepared scripts during conversations), and ‘assimilation’ (e.g.,

trying to blend in with a social group). (Hereafter, we use 'masking' to describe the suite of strategies used to disguise autistic traits). Masking is used to facilitate social communication between autistic and non-autistic people, which can be stressful and confusing (Hull et al., 2017). Unsuccessful social interactions are commonly attributed to autistic people's social-communication difficulties and poor understanding about the motivations, mental and emotional states of others ('theory of mind'; Baron-Cohen, Leslie, & Frith, 1985). These perceptions likely motivate autistic people to mask. However, autistic people report fewer social-communication difficulties during interactions with other autistic people (Gernsbacher, Stevenson, & Dern, 2017), suggesting that autistic *and* non-autistic people have difficulties understanding each other (Edey, Cook, Brewer, Johnson, Bird, & Press, 2016; see also 'the double empathy' problem; Milton, 2012).

Pearson and Rose (2021) suggest that masking extends beyond behavioural strategies and could be a trauma response that develops from experiences of stigma. It is well established that autistic people mask to avoid discrimination, stigma, and victimisation (Cage & Troxell-Whitman, 2019; Hull et al., 2017), and to gain access to employment and social inclusion. Indeed, autistic adolescents mask to avoid being perceived as mentally deficient and less competent by others (Bernardin, Mason, Lewis, & Kanne, 2021).

These cost-benefit characteristics describe why the CMAB categorises masking as both a demand and a means of resource gain. However, despite its potential benefits, long-term masking can harm the mental health of autistic adults and may contribute to suicidality (Bargiela, Steward, & Mandy, 2016; Cage & Troxell-Whitman, 2019; Livingston, Shah, & Happé, 2019). Masking can also conceal support needs (Baldwin & Costley, 2016) and contribute to the misdiagnosis and under-diagnosis of autism, particularly among women (Livingston et al., 2019; Milner, McIntosh, Colvert, & Happé, 2019). Masking can contribute to psycho-emotional disablement through feelings of guilt and isolation (Hull et al., 2017;

Livingston et al., 2019), withdrawal to avoid social rejection (Hull et al., 2017), and identity confusion (Pearson & Rose, 2021). However, while 'taking the mask off' can assist with recovery from autistic burnout (Mantzalas et al., 2021; Raymaker et al., 2020), unmasking is complex and may contribute to burnout through trauma associated with resultant bullying, discrimination, and stigma (Mantzalas et al., 2021; Miller et al., 2021; Pearson & Rose, 2021).

Sensory Sensitivities

Sensory sensitivities are common among autistic people of all ages and can significantly impact their mental health and wellbeing (Halim, Richdale, & Uljarević, 2018; Milner et al., 2019). Compared to the general population, autistic people are more likely to report over- or under-responsivity to sensory stimuli which continues across the lifespan (Ben-Sasson et al., 2009; Crane, Goddard, & Pring, 2009; Lane, 2020). Indeed, a study comparing sensory over-responsivity among autistic and non-autistic adults found that autistic participants self-reported increased over-responsiveness in all sensory categories (sight, smell, hearing, touch, taste, and proprioception) compared to a control group (Tavassoli, Miller, Schoen, Nielsen, & Baron-Cohen, 2014). Autistic females have identified sensory sensitivities as one of the most challenging aspects of autism that can reduce quality of life and contribute to meltdowns (externalised aggression, crying, distress) or shutdowns (internalising behaviours including emotional and cognitive dissociation, or appearing 'frozen'; Halim et al., 2018; Milner et al., 2019; Phung, Penner, Pirlot, & Welch, 2021). Sensory overload is a prime risk factor for autistic burnout, with reduced tolerance to sensory stimuli commonly reported during burnout episodes. Conversely, sensory withdrawal and avoidance can be beneficial for prevention and recovery (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020).

Personal Resources

Self-stimulatory Behaviours

Repetitive, self-stimulatory behaviours ('stimming') are a core diagnostic feature of autism (APA, 2013) and can be physical (e.g., fidgeting, rocking), vocal (e.g., humming, repeating phrases), visual (e.g., staring at a lava lamp), tactile (e.g., rubbing fabric), or olfactory (e.g., sniffing things; Steward, 2015). Stimming is an important form of sensory and emotional self-regulation that facilitates coping during overwhelming and stressful situations, (Kapp et al., 2019; Manor-Binyamini & Schreiber-Divon, 2019), and is a vital part of many autistic people's identity (Steward, 2015). Despite this, the use of noticeable stims by adults is stigmatising and generally socially unacceptable (Kapp et al., 2019). Some autism interventions focus on eliminating stims, which can be harmful for mental health (Halim, et al., 2018; Kapp et al., 2019). Findings from two qualitative studies (Higgins et al., 2021; Mantzalas et al., 2021) that examined autistic adults' lived experiences of autistic burnout (N=23 and N=612, respectively) suggest that stimming to regulate emotions helps offset the accumulation of stress that contributes to burnout. However, the stigma surrounding stimming can become internalised (Kapp et al., 2019), thus contributing to psycho-emotional disability.

Special Interests

Another diagnostic criterion of autism is restricted interests or activities (APA, 2013). 'Special interests' are topics about which autistic individuals are highly knowledgeable and competent, and provide enormous pleasure, familiarity, and calm during times of stress (McDonnell & Milton, 2014). These interests can facilitate identity formation (Jordan & Caldwell-Harris, 2012) and emotional self-regulation, as well as improve self-esteem and self-efficacy (McDonnell & Milton, 2014). While intense interests are usually called hobbies or passions among non-autistic people, they are often perceived as unusual and unhealthy obsessions among autistic people (McDonnell & Milton, 2014). A possible reason for these negative perceptions is that autistic people can perseverate or 'hyperfocus' on their beloved

activities to the exclusion of other things (Ashinoff & Abu-Akel, 2019). Intense focus, also called ‘monotropism’, (Murray, Lesser, & Lawson, 2005) may partly explain attention and social-communication differences in autism. Absorption in a preferred activity can make it difficult for autistic people to switch focus and engage in social interaction if they are interrupted (Milton, 2017). Deep immersion in an enjoyable activity is also called ‘flow’ (Ullén et al., 2012), which can mitigate depression and emotional exhaustion associated with workplace burnout among non-autistic people (Mosing, Butkovic, & Ullén, 2018).

As time with special interests can assist during recovery from autistic burnout (Higgins et al., 2021), they have been categorised as a personal resource in the CMAB. However, the overwhelming exhaustion that defines autistic burnout could offset the positive benefits of special interests if individuals lack the energy to engage with them. Additionally, hyperfocus may offset their protective qualities if it interferes with self-care (e.g., rest and eating regularly; Mantzalas et al., 2021); therefore, it is hypothesised that special interests may also increase personal demands.

Self-awareness

Autistic burnout occurs after demands build up over time; therefore, recognising early signs of physical and mental overwhelm is vital. It is estimated, however, that approximately 50% of autistic people experience alexithymia - difficulties identifying and describing one's feelings and emotions - compared to 5% of the general population (Berthoz & Hill, 2005; Kinnaird, Stewart, & Tchanturia, 2019). Individuals with alexithymia are more likely to experience emotion regulation and mental health difficulties (Kinnaird, et al., 2019), and it has been suggested that alexithymia could be a risk factor for workplace burnout (Riethof, Bob, Laker, Zmolikova, Jiraskova, & Raboch, 2020).

Alexithymia is also a prominent marker for impaired interoception (Shah, Hall, Catmur, & Bird, 2016). Interoception refers to the ability to perceive bodily states including pain, hunger, and

tension (Shah et al., 2016) and is vital for socio-emotional function (Murphy, Brewer, Catmur, & Bird, 2017). Atypical interoception is common among autistic adults (DuBois, Lymer, Gibson, Desarkar, & Nalder, 2017) and can contribute to poor self-regulation, poor physical and mental health (Shah et al., 2016), sensory symptoms (Murphy et al., 2017) and autistic burnout (Mantzalas et al., 2021; Pearson & Rose, 2021). Interoception difficulties occur throughout the lifespan, often spiking during adolescence and older-adulthood alongside developmental changes (e.g., puberty and menopause; Murphy et al., 2017). This is similar to the pattern observed for autistic burnout, suggesting that autistic individuals with alexithymia and/or interoception difficulties may be more vulnerable to autistic burnout.

Extant research suggests that self-awareness can improve after autistic burnout (compared to individuals' pre-burnout levels) as people learn to recognise triggers, develop and implement protective coping strategies, including self-care, planning, energy management, and boundary setting to prevent recurrence (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020).

Social Support

Social support is defined as “an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient” (Shumaker & Brownell, 1984, p.13). Social support is provided by a network of family, friends, or others who individuals can turn to during times of stress or crisis. Good social support can have a positive impact on the self-esteem, independence, mental health, and wellbeing of autistic adults (Baldwin & Costley, 2016; Zener, 2019). Examples include understanding autistic peoples’ traits and sensitivities and accommodating for communication, sensory and social needs at home, school, or work (Hayward, McVilly, & Stokes, 2019; Zener, 2019). Research shows a link between poor social support and both depression and suicidal ideation in autistic adults (Hedley et al., 2018). A lack of appropriate

support and barriers to support have been identified as risk factors for autistic burnout (Higgins et al., 2021; Raymaker et al., 2020).

Consistent with COR theory, the proposed CMAB recognises that, while social support is a protective resource, it can also contribute to personal demands. For example, support networks may get tired of helping and become unwilling to help during chronic stress (Hobfoll & Freedy, 2017). Well-meaning support that is incompatible with the needs of autistic adults can also prolong or worsen episodes of autistic burnout (Higgins et al., 2021). Furthermore, if autistic individuals cannot offer reciprocal support due to overload, relationships may become strained, narrowing future sources of support.

Mental Strain

Depression, Anxiety and Stress

Studies show that approximately 70% of autistic people experience a co-occurring mental health condition such as depression or anxiety throughout the lifespan (APA, 2013; Au-Yeung et al., 2018; Hofvander et al., 2009), with heightened risk during key developmental milestones (e.g., adolescence; Lai et al., 2019). Indeed, autistic adults often report that their first experience of autistic burnout occurred during the transition to high school or adulthood. Early findings indicate that co-occurring conditions may represent a risk factor for autistic burnout and exacerbate existing conditions (Mantzalas et al., 2021; Raymaker et al., 2020). In addition, stressful life events such as bullying, victimisation (Streckovic, Brunsting, & Able, 2014), unemployment, and discrimination (Milovanov, Paquette-Smith, Lunksy, & Weiss, 2013) contribute to mental strain among autistic people during childhood and adulthood (Berg, Shiu, Acharya, Stolbach, & Msall, 2016; Fuld, 2018; Milovanov et al., 2013). Stressful life events can also contribute to autistic burnout, with heightened risk when individuals cannot relieve stress, or when requests for support are dismissed or disbelieved (Raymaker et al., 2020).

Similarities between (workplace) burnout and depression have fuelled debate about whether the two are distinct constructs, or different points along a depression 'spectrum'. Bianchi, Schonfeld and Laurent (2014; 2015) posit that common symptoms (e.g., exhaustion, difficulties concentrating) and methodological flaws in the structure and measurement of burnout support the argument that burnout is a form of atypical depression. However, a later systematic review and meta-analysis which examined the relationship between burnout, depression and anxiety concluded that the three conditions are distinct and robust constructs (Koutsimani, Montgomery, & Georganta, 2019). In a qualitative investigation, participants with lived experience of both burnout and depression described clear differences between the two, such as more debilitating exhaustion during burnout than depression, and the ability to enjoy non-work activities during burnout while they were unable to enjoy anything while depressed (Tavella & Parker, 2020). Similarly, autistic adults differentiate between depression and autistic burnout, and report that it is possible to engage in their special interests during periods of burnout (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020).

Wellbeing

Satisfaction with Life

Satisfaction with life (SWL) is a component of subjective wellbeing that can impact an individual's mental health outcomes. While heritable factors and temperament may contribute to SWL, environmental factors play a key role (Pavot & Diener, 2008). Research among autistic adults shows that social support and connectedness, social inclusion and community positively influence SWL (Casagrande, Frost, Bailey, & Ingersoll, 2020), whereas victimisation, negative life events and unemployment have a negative impact (Griffiths et al., 2019). SWL may also offset mental strain and buffer against autistic burnout, particularly for individuals who make positive

life changes after experiencing burnout (e.g., career change, setting boundaries; Higgins et al., 2021; Mantzalas et al., 2021).

Community

Distinct from social support, a ‘community’ is a group of people who share common characteristics, interests, attitudes, and identity. Connection to people with shared lived experiences can have a positive impact on wellbeing and improve self-advocacy (Haney & Cullen, 2017; Kapp, 2020). The disability rights and self-advocacy movements and widespread access to the internet have contributed to the formation of autistic communities (Bagatell, 2010), whose members connect through social media (e.g., the #ActuallyAutistic hashtag), gaming platforms, blogs, discussion forums and advocacy groups. Autistic communities (e.g., autistic parents, autistic people of colour, gender-diverse autistic individuals) are a valuable source of acceptance and pride for autistic people who often face discrimination and stigma elsewhere (Bagatell, 2010). Members of autistic communities offer and receive autism-related information and advice, understanding and validation about shared lived experiences (Mantzalas et al., 2021; Raymaker et al., 2020). Positive interactions with autistic peers and role models may lessen internalised oppression associated with psycho-emotional disablism (Reeve, 2014). Thus, according to the CMAB, belonging to a supportive community could help mitigate the onset and impact of autistic burnout.

Autistic Burnout

Exhaustion

Consistent with the broader burnout literature, exhaustion is a core feature and consequence of autistic burnout. Autistic adults have described a debilitating state of physical, mental, and emotional exhaustion that significantly impacts their ability to function. Aspects of functioning affected during autistic burnout include reduced executive functioning (e.g., planning, organisation), loss of focus and concentration, difficulties producing and

processing speech, and the loss of previously acquired skills, including self-care abilities (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020).

Social Withdrawal

The deleterious impact of autistic burnout on energy levels can lead to withdrawal from daily activities including work, study, and socialising (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020). While avoidance coping is generally perceived to be maladaptive, or only beneficial in the short-term (Suls & Fletcher, 1985), early findings suggest its utility may differ for autistic people experiencing burnout (Mantzalas et al., 2021). Indeed, autistic adults commonly use social, sensory, and interpersonal withdrawal to prevent autistic burnout and facilitate recovery (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020). As a coping mechanism, withdrawal from stressful situations may allow the individual time to rest and recover, thereby limiting resource losses (Hobfoll & Freedy, 2017).

Additional Factors

Gender

In the CMAB, it is hypothesised that gender could influence the onset of autistic burnout, possibly through the motivations for masking, which as previously discussed, is a key risk factor. Some studies suggest that autistic males are less socially motivated to mask than autistic females and feel less pressure to fit in (Milner et al., 2019; Sedgewick, Hill, Yates, Pickering, & Pellicano, 2016). Males also report more positive feelings associated with camouflaging compared to females (Hull et al., 2017). Societal expectations associated with the female gender role may increase the burden on autistic females through a perceived need to maintain a façade, especially if they do not enjoy stereotypical aspects of femininity such as wearing makeup and a desire for motherhood (Bargiela et al., 2016; Cage & Troxell-Whitman, 2019; Kanfiszer, Davies, & Collins, 2017).

Hobfoll (1989) acknowledges that women (in general) may be more vulnerable to stress and face more barriers to resource acquisition than men. Indeed, being autistic and female is associated with an increased risk for anxiety and depression (Uljarević et al., 2019). Unique factors associated with being female such as menstruation, menopause (Moseley, Druce, & Turner-Cobb, 2020; Steward, Crane, Roy, Remington, & Pellicano, 2018), and pregnancy and childbirth (Samuel, Yew, Hooley, Hickey, & Stokes, 2021) may contribute to a greater risk of autistic burnout among females as these experiences are often associated with heightened sensory difficulties and anxiety, poorer executive functioning, and a reduced capacity for emotion regulation. Additionally, people on the autism spectrum are more likely to experience gender dysphoria (e.g., identify as transgender, non-binary; Cooper, Mandy, Butler, & Russell, 2021; George & Stokes, 2018); thus, it is possible that the stress of claiming or masking multiple marginalised identities (e.g., transgender, disabled) could increase the risk of autistic burnout.

Age

Age may influence vulnerability to autistic burnout at various stages throughout the lifespan. While extensive research has focused on autism in childhood, autistic advocates and researchers have highlighted the urgency of studying autism in later life (Howlin & Taylor, 2015; Michael, 2016), particularly as autistic adults have a shorter life expectancy than adults in the general population (Hirvikoski et al., 2016). Adult milestones including post-secondary education, marriage, and parenthood can increase the mental health burden for autistic adults (Mason et al., 2019; Raymaker et al., 2020; Sterling, Dawson, Estes, & Greenson, 2007). Research suggests that changes associated with developmental transitions (e.g., adolescence, early adulthood) could increase vulnerability to autistic burnout because they place additional strain on coping resources (Mantzalas et al., 2021; Phung et al., 2021; Raymaker et al., 2020). Advancing age can also bring a variety of challenges including cognitive changes,

bereavement, loss of social support, serious or chronic illness, and retirement. For example, emotional changes during menopause can significantly overtax the established coping resources of autistic women (Moseley et al., 2020). While such life events are universal, they may be additionally burdensome for autistic people due to changes in established routines, extra strain on coping resources, additional sensory demands, and the potential loss of support networks.

Social and Environmental Factors

While autistic burnout appears to be common among autistic people, it is not experienced by all, and should not be accepted as an inherent part of being autistic. Research suggests that social and environmental factors contribute significantly to the onset and recurrence of autistic burnout (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020), and was described by one autistic adult as the consequence of "being in a world that is not your world" (Higgins et al., 2021, p.6). Environmental influences can include harmful sensory environments and a lack of family or workplace support. At a societal level, the widespread lack of autism awareness and acceptance can impact accurate and timely autism diagnosis, access to supports, underlie motivations for masking and contribute to internalised stigma (Higgins et al., 2021; Mantzalas et al., 2021; Raymaker et al., 2020). While various protective strategies have been proposed here, most are person-centred. Societal change to reduce stigma, discrimination and inhospitable environments for autistic people is vital for long-term and sustained prevention and recovery from autistic burnout.

Conclusion

The proposed CMAB identifies risk and protective factors for autistic burnout using a theoretical framework informed by the JD-R, COR theory, S-RM, and neurodiversity paradigm, and includes measurable variables from extant literature classified as personal demands, personal resources, mental strain, and wellbeing. In so doing, direct and indirect,

testable relationships are proposed that may influence the risk of autistic burnout. While anecdotal reports and the few existing qualitative studies indicate that burnout is common among autistic people, it is not experienced by all. It is therefore important to examine risk and protective factors to identify reasons why some autistic individuals may be more vulnerable to burnout. Identifying protective and vulnerability factors forms a basis for the prevention or amelioration of autistic burnout.

To date, research has focused on the experiences of autistic adults who have indicated that autistic burnout often first occurs early in life and recurs across the lifespan, supporting the need to adopt a developmental approach in future research. This approach will be important to identify unique risk factors and preventive strategies that may help to interrupt the harmful cycle of burnout which can impede achievement and independence. The CMAB proposes the underlying mechanisms of autistic burnout, but can be adapted to investigate burnout among different groups whose demands and resources may vary greatly (e.g., autistic people with high support needs; autistic children; or older autistic women).

Having proposed the CMAB, it is important to empirically test the model to examine the hypothesised relationships. As research in the field of autistic burnout develops, the research findings will further inform the CMAB and lead to the incorporation of other relevant variables. It is anticipated that this body of research will lead to the future development of resources and supports to prevent the onset of autistic burnout and to assist autistic individuals through recovery.

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Table 1

Hypothesised relationships among variables in the Conceptual Model of Autistic Burnout

CMAB Facet	Hypothesis
Personal demands	• Will directly increase the risk of autistic burnout. • Will indirectly increase the risk of autistic burnout by increasing mental strain. • May either increase or decrease personal resources. • Will decrease wellbeing.
Personal resources	• Will directly decrease the risk of autistic burnout. • May either increase or decrease personal demands. • Will indirectly decrease the risk of autistic burnout by increasing wellbeing. • Will decrease mental strain.
Mental strain	• Will increase the risk of autistic burnout. • Will decrease wellbeing.
Wellbeing	• Will decrease the risk of autistic burnout. • Will decrease mental strain.
Additional variables	• Gender and age may influence the risk of autistic burnout. • Social and environmental factors will influence the risk of autistic burnout.