Understanding the Impact of Camouflaging in Autistic People

Clarissa Osborne

Candidate Registration Number: 100111966

Primary Supervisor: Dr Rachel Russell

Secondary Supervisor: Dr Joe Barker

Thesis submitted in partial fulfilment of the degree of

Doctorate in Clinical Psychology

Faculty of Medicine and Health Sciences

University of East Anglia

Submission Date: 3rd March 2025

Thesis Portfolio Word Count: 39,460

Please note that the material within this thesis portfolio has been informed by the author's ClinPsyD thesis proposal submitted in July 2023 and may demonstrate some overlap.

Abstract

Background. Autistic people often camouflage to hide or modify aspects of themselves in social situations; however, this can have negative consequences for autistic people's mental health and sense of self and may delay autism identification. Further research on the impact of camouflaging in autistic adults is needed to understand the underlying mechanisms and inform mental health support for autistic people.

Systematic Review. A systematic review explored how camouflaging and autistic burnout are experienced in relation to one another by autistic people. A narrative synthesis with thematic analysis was used to synthesise the qualitative data from 14 studies. Four themes with two subthemes were found: ‘the energy cost of camouflaging’; ‘burnout: camouflaging takes its toll’ with the subtheme ‘too drained to disguise’; ‘time and space to recharge’ with the subtheme ‘unmasking is a balancing act’; and ‘the autistic struggle’.

Empirical Paper. An empirical study was conducted aiming to explore the impact of camouflaging on self-concept clarity, psychological wellbeing, and age of diagnosis in autistic adults, and identify potential moderators of these relationships. One hundred and eighty-five autistic adults were recruited via social media to complete an online questionnaire. Camouflaging was found to have a significant effect on self-concept clarity, depression, and social anxiety, and gender diversity significantly moderated camouflaging’s relationship with both self-concept clarity and depression.

Conclusions. These findings have implications for mental health professionals working with autistic adults, highlighting the role of camouflaging in mental health difficulties. The findings of both papers are critically discussed and directions for future research are proposed.

Table of Contents

List of Tables

Chapter Two: Systematic Review

Chapter Four: Empirical Paper

Chapter Five: Extended Methodology and Post-hoc Analyses

List of Figures

Chapter Two: Systematic Review

Chapter Four: Empirical Paper

Chapter Five: Extended Methodology and Post-hoc Analyses

List of Appendices

Acknowledgements

Firstly, I'd like to express my appreciation to my research supervisors, Dr Rachel Russell and Dr Joe Barker, for their support throughout the thesis process. I'm very grateful for all the time, knowledge, and feedback you have shared with me; completing this thesis would not have been possible without your constant guidance and support. Thank you to Dr Saskia Keville for your supervision and contributions during the early stages of my empirical research study, your encouragement and inspiring words across this time period and my MSc continue to be invaluable for me, and without your willingness to be involved I would not have been able to complete this research. I'd also like to extend this thank you to Dr Amanda Ludlow for your data analysis expertise and support with planning and refining my empirical study proposal.

Secondly, I'm extremely grateful to each and every person who took part in my empirical study. I'd also like to thank my academic advisor, Dr Sarah Fish, for her support and guidance across the three years. Thanks should also go to my cohort of fellow trainees for their ongoing humour and encouragement. In particular, I'm deeply grateful to Amber for her contributions during the systematic review and moral support throughout the thesis. Thank you for always having confidence in me and seeing my strengths; I'm appreciative that I always had you to turn to.

Finally, I'd like to thank my family and friends for believing in me and supporting me to get to this point. Special thanks to Daisy for being there for me over the years, offering emotional and practical support, and listening to my concerns and rants no matter the length.

Chapter One

Introduction

Word Count: 1339

Autism

Autism, clinically known as autism spectrum disorder, is a neurodevelopmental condition characterised by the DSM-5-TR as difficulties with social communication and interaction, and restrictive, repetitive patterns of behaviour or interests (APA, 2022). The prevalence of diagnosed autism in the UK has increased exponentially, particularly in adulthood (Russell et al., 2022), with 1-2% of the population in England estimated to be undiagnosed (O'Nions et al., 2023).

Conversely to the medical model employed by the DSM-5-TR, many autistic individuals advocate for characterising autism within the neurodiversity paradigm. Neurodiversity posits that neurotypes that deviate from the norm, such as autism, attention-deficit hyperactivity disorder (ADHD), and specific learning difficulties, are natural forms of human variation with inherent strengths and value (Blume, 1998; Singer, 1998). Under the neurodiversity paradigm, autism is reframed as difference rather than deficit (Kapp et al., 2013), highlighting the reciprocal nature of social communication (Crompton, Ropar, et al., 2020; Crompton, Sharp, et al., 2020; Milton, 2012) whilst acknowledging the inherently disabling challenges autistic people experience, particularly as a minority identity with needs unmet within society (Botha & Gillespie-Lynch, 2022; den Houting, 2019).

Autistic people have a higher prevalence of co-occurring mental health conditions than in the general population (Lai et al., 2019). Approximately 70% of autistic people have additional neurodevelopmental or mental health diagnoses (Lai et al., 2014). There is an association between mental health difficulties and a later diagnosis of autism (Bargiela et al., 2016; Leedham et al., 2020), with earlier identification related to better quality of life (Atherton et al., 2022). The prevalence of suicidality is high within the autistic population (Hedley & Uljarević, 2018), with prevalence rates of 1-35% for suicide attempts and 11-66% for suicidal ideation. This is more than nine times higher than suicidality within the general population

and up to six times higher than clinical populations (S. Cassidy et al., 2014), with suicide reported to be a leading cause of premature death for autistic people (Hirvikoski et al., 2016). Yet, many mental health professionals lack knowledge about working with autistic people (Lipinski et al., 2022; Maddox et al., 2020) and service provision often does not adequately meet their needs (Brede et al., 2022).

Notably, autistic people's vulnerability to poorer psychosocial outcomes is not necessarily intrinsically linked with the fact they are autistic but rather may be reflective of experiencing the burden of minority stressors (Botha & Frost, 2020). For example, concealing their autistic identity through camouflaging may partially explain mental health difficulties rather than the autistic traits themselves (Moore et al., 2024).

Autistic Camouflaging

Camouflaging refers to conscious and unconscious strategies used by autistic people to 'fit in' by hiding or modifying aspects of themselves during social situations (Hull et al., 2017). During the development of the Camouflaging Autistic Traits questionnaire (CAT-Q), Hull et al. (2019) found that camouflaging items loaded onto three factors; masking, compensation, and assimilation. Masking refers to hiding autistic characteristics and can involve suppressing 'stims' (Schneid & Raz, 2020), selective information sharing (Jedrzejewska & Dewey, 2022), concealing support needs (Sullivan, 2023), self-monitoring (J. Cook et al., 2021), and adjusting the face or body to model neurotypical communication (J. Cook et al., 2022). Compensation involves using strategies to counteract social difficulties, such as learning through observation (Tierney et al., 2016) and practicing scripted responses (J. Cook et al., 2021). Livingston et al. (2019) differentiated between shallow compensation and deep compensation strategies. Whereas shallow compensation uses simple and inflexible strategies, deep compensation involves complex and flexible strategies, such as using pattern recognition and internal data

modelling to understand others. Assimilation refers to fitting in with others and may involve playing a role or character (Schneid & Raz, 2020), copying others' style or mannerisms (Hull et al., 2017), and minimising potential negative judgement (J. Cook et al., 2022).

Motivations for Camouflaging

Camouflaging has been described as an obligation rather than a choice (Mandy, 2019), necessary to avoid rejection and negative perceptions by others (J. Cook et al., 2021; Hull et al., 2017; Seers & Hogg, 2023). Further, camouflaging may be viewed as a learned trauma response (Cleary et al., 2023) and adaptive morphing (Lawson, 2020), developed as protection from the threat of stigma and discrimination that autistic people can experience (Radulski, 2022; Schneid & Raz, 2020). This can be extended to the internalised shame and stigma autistic people experience related to their diagnosis (Cage & Troxell-Whitman, 2019). Whilst camouflaging is seen as a survival mechanism needed to stay safe from expected victimisation, this can inadvertently increase the risk of polyvictimisation through the compliant and 'fawning' nature (Bargiela et al., 2016; Pearson et al., 2023; Perich, 2024).

Cage and Troxell-Whitman (2019) identified two further motivations for camouflaging as reported by autistic people, consisting of relational or conventional reasons. Autistic people report that camouflaging can be helpful in promoting relational outcomes, such as social acceptance (Bernardin, Mason, et al., 2021; Cage et al., 2018), forming connections and relationships (Hull et al., 2017; Tierney et al., 2016), and maintaining the comfort of others (Jedrzejewska & Dewey, 2022). Camouflaging can facilitate functional purposes in formal settings due to conventional reasons, such as gaining employment opportunities and achieving professional goals (Livingston et al., 2019; Sullivan, 2023).

Impact of Camouflaging

Whilst camouflaging can be helpful in building relationships (Halsall et al., 2021), achieving professional goals (Hull et al., 2017), and avoiding negative social experiences (Bernardin, Mason, et al., 2021), the benefits may be outweighed by the negative consequences (Mandy, 2019). Camouflaging has been associated with poorer psychological wellbeing (Beck et al., 2020) and higher levels of depression, anxiety, and social anxiety (Hull et al., 2021; Khudiakova et al., 2024). Cassidy et al. (2018) found that camouflaging is a significant risk marker for suicidality in autistic adults. Camouflaging has been described as exhausting (Hull et al., 2017) and may contribute to the development of autistic burnout (Raymaker et al., 2020). Though, the impact of camouflaging on mental wellbeing may be related to the individual's appraisal (J. Evans, 2022) or perceived success (Halsall et al., 2021).

Autistic people often report a negative impact of camouflaging on their sense of identity (Hull et al., 2017; Lilley et al., 2022; Narzisi, 2023). Through playing different social roles, autistic people can experience feelings of inauthenticity (J. Cook et al., 2021; Klein & Macoun, 2025) and a devalued sense of self (Leedham et al., 2020). Hiding autistic traits through camouflaging can also impact on the identification of autism and may delay diagnosis (Milner et al., 2022). Qualitative research has described the effect of camouflaging in delaying identification (A. Cook et al., 2018; Livingston et al., 2019) and quantitative studies have found an association between higher camouflaging and later age of diagnosis (McQuaid et al., 2022; Milner, Colvert, et al., 2023). This delayed diagnosis may subsequently have a negative impact on mental health, such as a lower quality of life (Atherton et al., 2022; Kamio et al., 2012; Oredipe et al., 2023) and psychological wellbeing (Lupindo et al., 2023). Consequences of late diagnosis on mental health may also be compounded by the prevented role of diagnosis in promoting self-acceptance

and compassion (Harmens et al., 2022; Leedham et al., 2020; Seers & Hogg, 2023).

Thesis Aims

This thesis aimed to explore the impact of camouflaging on factors related to wellbeing, self-concept clarity, and diagnosis age in autistic people. This was executed through a systematic review and an empirical research study. The systematic review provides an understanding of how camouflaging and autistic burnout are experienced in relation to one another by autistic people. The empirical paper was conducted to explore the impact of camouflaging on self-concept clarity, psychological wellbeing, and age of diagnosis in autistic people, and identity potential moderators of these relationships. Extended methodology and post-hoc exploratory analyses are reported to supplement the empirical paper (chapter 5). A bridging chapter outlines the transition between the systematic review and empirical paper (chapter 3). The combined discussion and critical evaluation chapter consolidates the findings of both the systematic review and empirical paper, through considering strengths and limitations, theoretical and clinical implications, and directions for future research (chapter 6).

Chapter Two

Systematic Review

Autistic people's experience of camouflaging and autistic burnout in relation to one another: A systematic review

This systematic review has been developed for submission to Research in Autism. Author guidelines are outlined in Appendix A. Journal word count limit: 10,000 words (not including the title page, abstract, figure legends, tables and reference list).

Word Count: 7806

Autistic people's experience of camouflaging and autistic burnout in relation to one another: A systematic review

Clarissa Osborne[a], Dr Joe Barker[a], Amber Cole[a], and Dr Rachel Russell[a]

[a]Norwich Medical School, University of East Anglia, Norwich Research Park, Norwich,

NR4 7TJ, UK

Corresponding author: Clarissa.Osborne@uea.ac.uk

Declarations of interest: None.

The authors received no financial support for the research, authorship, or publication of this article.

Abstract

An association between camouflaging and autistic burnout has been described qualitatively by autistic people but there have been limitations to empirically measuring this. This review aimed to synthesise qualitative data to understand how camouflaging and autistic burnout are experienced in relation to one another by autistic people. A systematic search of five databases and reference lists identified 14 studies to be included in the review. Each included study was appraised for quality using the Critical Appraisal Skills Programme (CASP). A narrative synthesis with thematic analysis was used to synthesise the qualitative data. Four themes with two subthemes were found: ‘the energy cost of camouflaging’; ‘burnout: camouflaging takes its toll’ with the subtheme ‘too drained to disguise’; ‘time and space to recharge’ with the subtheme ‘unmasking is a balancing act’; and ‘the autistic struggle’. Confidence in these findings was assessed using the GRADE-CERQual approach and relationships between the themes were explored using concept mapping. Implications for clinicians supporting autistic people and areas for further research are discussed.

Keywords: autism, camouflaging, autistic burnout, systematic review

Despite initial anecdotal accounts of autistic burnout by autistic people online (Boren, 2017; Endow, 2015; Rose, 2018), researchers have only recently started to define and conceptualise this experience (Higgins et al., 2021; Raymaker et al., 2020). Raymaker et al. (2020) developed an early definition of autistic burnout by using a community-based participatory research approach to conduct a thematic analysis of interviews with autistic adults. They defined autistic burnout as “a syndrome conceptualized as resulting from chronic life stress and a mismatch of expectations and abilities without adequate supports. It is characterized by pervasive, long-term (typically 3+ months) exhaustion, loss of function, and reduced tolerance to stimulus” (Raymaker et al., 2020, p. 140).

Higgins et al. (2021) used the Grounded Delphi method with autistic ‘experts by lived experience’ to develop a consensus definition of autistic burnout. Autistic burnout was defined as “a severely debilitating condition with onset preceded by fatigue from camouflaging or masking autistic traits, interpersonal interactions, an overload of cognitive input, a sensory environment unaccommodating to autistic sensitivities and/or other additional stressors or changes” (Higgins et al., 2021, p. 2365). They specified primary criteria of; (1) mental and physical exhaustion and (2) interpersonal withdrawal, in addition to reduction in functioning, executive functioning difficulties, and/or increased intensity of autistic traits.

Autistic people have described the exhaustion of autistic burnout as having uniquely autistic causes (Welch et al., 2021). Suggested contributing factors include; sensory overload (Welch et al., 2021), camouflaging (Mantzalas et al., 2022), unexpected demands (Wood & Happé, 2021), minority stress (Botha & Frost, 2020), and lack of support (Livingston et al., 2019). Cage and McManemy (2022) found that non-autistic students with higher autistic traits experienced higher levels of personal burnout, suggesting that characteristics related to autism specifically link to depleted mental resources and more burnout.

Many autistic people have reported first experiencing autistic burnout in childhood or adolescence (Mantzalas et al., 2022), and that the frequency or severity worsens with age and increased life demands (S. R. Arnold et al., 2023a). Phung et al. (2021) found that burnout may occur in a cyclical nature with inertia, meltdowns, and shutdown (referred to as BIMS) and the experiences demonstrate partial overlap. The young autistic participants also placed less emphasis on burnout compared with meltdowns; this could be representative of the familiar language used with young people, but may also indicate burnout as related to increasing age and learning to manage the externalised meltdowns (Phung et al., 2021).

Autistic burnout is reported to have negative consequences on physical and mental health and capacity for everyday functioning (Mantzalas et al., 2022), but can also promote a pathway to identifying undiagnosed autism (Zener, 2019b). Though autistic burnout can present as depression (Zener, 2019b), autistic people have emphasised a distinction between the two experiences (Higgins et al., 2021). Autistic burnout has also been differentiated from general or occupational burnout (Mantzalas et al., 2024; Schoondermark et al., 2024), and a new term such as ‘autistic exhaustion’ has been proposed to avoid misunderstandings (Tomczak & Kulikowski, 2024).

Typical support or therapies may be unhelpful and even worsen autistic burnout, such as the use of behavioural activation (Mason, 2024). Suggested helpful strategies and support for autistic burnout include reducing expectations, unmasking, time and space away from others, and engaging with sensory soothing activities (S. R. Arnold et al., 2023a; Raymaker et al., 2020). It is proposed that building personal resources could be protective of experiencing autistic burnout, such as engaging with special interests, stimming, and developing self-awareness (Mantzalas et al., 2022). Zener (2019a) outlines the INVEST therapeutic approach

which emphasises the importance of setting parameters with energy levels in preventing autistic burnout. Many autistic people have aligned with the ‘Spoon Theory’ metaphor to understand and manage their energy levels (Miserandino, 2013). This describes how autistic people have a finite energy resource, with each ‘spoon’ representing a unit of energy. Daily activities require spending a certain number of those spoons, which can vary depending on the energy demands of the task.

There have been recent attempts to develop a specific measure of autistic burnout. The Academic Autism Spectrum Partnership in Research and Education (AASPIRE; Raymaker et al., 2020) developed the Autistic Burnout Measure (AABM); however, this remains unpublished and may lack specificity (S. R. Arnold et al., 2023b). Arnold et al. (2023b) employed the Autistic Burnout Severity Items (ABSI) measure when assessing the validity of the AABM. They identified concerns with using the ABSI as a unidimensional measure, highlighting the multifaceted nature of autistic burnout and the importance of resolving conceptual issues prior to measuring the construct.

Camouflaging and Autistic Burnout

Camouflaging describes the ways autistic people use to try to ‘fit in’ by hiding or modifying themselves during social interactions (Hull et al., 2017). Autistic people might mask their autistic traits (J. Cook et al., 2022), practice scripted responses (Livingston et al., 2019), and play a role or character (Schneid & Raz, 2020) to camouflage. Whilst camouflaging can be helpful in promoting relationships (Tierney et al., 2016) and employment opportunities (Sullivan, 2023), it has been described as a necessary survival mechanism to protect autistic people against the threat of stigma and discrimination (Radulski, 2022). The impact of camouflaging can lead to negative mental health outcomes (Khudiakova et al., 2024) and a conflicting sense of self (Lilley et al., 2022).

Masking is one of the most common reasons autistic people give for autistic burnout (Mantzalas et al., 2022; Stanich, 2024). Autistic participants from several studies have described the exhausting and effortful nature of camouflaging that is indicative of a risk factor for autistic burnout (Ferguson et al., 2024; Knott & Taylor, 2014; Leedham et al., 2020; Pearson et al., 2023; Tierney et al., 2016; Tint & Weiss, 2018; Wood & Happé, 2021). Camouflaging has been described as difficult to sustain (Livingston et al., 2019), with autistic people needing time to recover afterwards (Anderson et al., 2020; Hull et al., 2017) and modifying their schedules to account for its impact (Seers & Hogg, 2023).

However, the nature of this association differs according to current definitions of autistic burnout. Higgins et al. (2021) indicated that camouflaging contributes to the onset of autistic burnout and that this is characterised by a reduced ability to mask, whereas Raymaker et al. (2020) reported masking as one of a combination of potential life stressors that could lead to autistic burnout and suggested unmasking as a potential solution. Further, Raymaker et al. (2020) recommended that our understanding of autistic burnout could be benefited by interacting with masking research. Using a theoretical framework, Pearson and Rose (2021) conceptualised how masking could lead to burnout, referred to as breaking point. Their model proposed that both the effort to sustain a masked response and the disconnection from identity or internal cues, leads to an increase in stress and difficulties regulating that stress, resulting in breaking point.

Furthermore, the ability to explore this association quantitatively has been limited due to the lack of a standardised measure for autistic burnout. Despite the qualitative support for an association between camouflaging and autistic burnout, early findings using the evolving autistic burnout measures have had mixed results (S. R. Arnold et al., 2023b; Mantzalas et al., 2024). The Camouflaging Autistic Traits questionnaire (CAT-Q; Hull et al., 2019) has been found to either not correlate or

only moderately correlate with the AABM (S. R. Arnold et al., 2023b; Mantzalas et al., 2024). Aside from concerns about the robustness of the AABM, this may reflect a complex relationship of camouflaging with autistic burnout that cannot be captured with the current measures, such as being a precursor to the onset which is no longer significant once experiencing autistic burnout (S. R. Arnold et al., 2023b). This may also be related to the contribution of unconscious camouflaging strategies to autistic burnout which are unable to be captured by the CAT-Q (Mantzalas et al., 2024).

The Present Review

Evidently an association between camouflaging and autistic burnout has been described by autistic people but there have been limitations to empirically measuring this. Given this lack of quantitative research, reviewing qualitative findings exploring autistic people's own experiences offers a valuable starting point in furthering our understanding. Therefore, this systematic review aims to answer the research question: how are camouflaging and autistic burnout experienced in relation to one another by autistic people?

Methods

This review was registered with PROSPERO (CRD42024623386) and followed the Preferred Reporting for Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). See Appendix B for the PRISMA checklist.

Search Strategy

The following databases were searched: EMBASE (Ovid), CINAHL Ultimate (EBSCOhost), MEDLINE Ultimate (EBSCOhost), PsycINFO (EBSCOhost), and Web of Science Core Collection. The search was adapted to each database's specific search requirements (see Appendix C) using a combination of the search

terms showed in Table 1. Electronic searches using backward citation was completed by searching reference lists of included studies and past systematic reviews. The searches were conducted on 8th December 2024 and search alerts were used to identify any relevant literature published until 24th December 2024.

Study Selection

All citations were imported into EndNote 21 (Clarivate, 2023) and duplicates were removed. Remaining citations were then imported into Rayyan (Ouzzani et al., 2016) for screening. Title and abstracts were screened according to the inclusion/exclusion criteria (see Table 2). The lead reviewer (CO) and a second reviewer (AC) independently screened 20 randomly selected studies at title and abstract level to pilot the search strategy. No discrepancies occurred at this stage, but one clarifying line was added to the search strategy. This specified the inclusion of studies where camouflaging and autistic burnout are referred to in relation to one another, even where the overall aim of the study was not on either concept. The remaining studies were then screened by CO and a random sample of 15% (*n* = 368) were blindly dual screened by AC. Cohen's Kappa was calculated to assess inter-rater reliability at the title and abstract level of screening, and the results

Table 1

Search Terms

Topic	Terms
Camouflaging	camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*
Autistic Burnout	burnout OR burn* out OR fatigue OR exhaust* OR overwhelm* OR function* OR toleran* OR withdraw* OR energy
Autism	autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD

indicated almost perfect agreement between CO and AC (κ = 0.94). The only discrepancy was resolved through discussion by CO and AC. The included studies were then screened at full-text level by CO and a random sample of 50% (*n* = 7) were independently screened by AC. There was 100% agreement between CO and AC at full-text level of screening, with no discrepancies. Studies excluded during full-text screening with the rationale for exclusion are shown in Appendix D.

Data from included studies was extracted into Microsoft Excel, using a specifically designed template. The data extracted included the author, year of publication, sample size, participant demographics and autism diagnosis information, study methodology, and relevant findings. Relevant findings pertained to the themes, subthemes, participant quotes, and author's interpretation that addressed the association between camouflaging and autistic burnout.

Quality Assessment

The methodological quality and limitations of the studies were appraised using the Critical Appraisal Skills Programme (CASP, 2023) qualitative studies checklist. The CASP qualitative checklist consists of 10-items, including two initial screening questions focussed on the aims of studies and the appropriateness of qualitative methodology. The items are answered with 'yes', 'can't tell', and 'no', where 'can't tell' also refers to partially met. Whilst scoring methods have been employed in other systematic reviews, CASP does not assign a scoring system to their checklists as total quality scores can be misleading (CASP, 2023). Instead the Cochrane Qualitative and Implementation Methods Group state that the quality assessment outcomes should be discussed and the impact of the methodological limitations on the review findings should be considered (Noyes et al., 2018). Therefore, studies were only to be excluded from this review on the basis of quality assessment if the two screening criteria on the CASP checklist were not met, as this would be indicative of concerns around the validity of the findings. Otherwise,

Table 2

Inclusion and Exclusion Criteria for Screening

Inclusion	Exclusion
Camouflaging (or synonyms) referred to in autistic burnout studies[a,b]; OR burnout (or synonyms) referred to in camouflaging studies[a,b]; OR camouflaging (or synonyms) and burnout (or synonyms) referred to each other[a.b]	Quantitative Research
	Articles that do not report primary data
	Articles that do not mention camouflaging and burnout in reference to each other
	Non-autistic participants (people who do not have a diagnosis of autism or do not identify as being autistic; parents/carers of autistic people; professionals working with autistic people)
Primary qualitative data related to camouflaging or autistic burnout	
Autistic participants (with a diagnosis or self-identifying as autistic)	
Peer reviewed journal articles	Other types of literature; theses or dissertations, case studies, systematic reviews, book chapters, conference papers, opinion pieces, and review articles
Full text available in English	

[a] For title and abstract level of screening, this criteria is to be met within the title or abstract

[b] For full-text level of screening, this criteria is to be met within the results or analysis

studies were not to be excluded from the review; the CASP findings were used only to inform considerations of methodological limitations when assessing confidence in the review findings. Each of the included studies were independently assessed by CO. A sample of the studies (*n* = 11) were also assessed by AC and the results were then compared, with any discrepancies resolved through discussion.

Data Analysis

A narrative synthesis was used to summarise and interpret the secondary qualitative data from across the studies (Popay et al., 2006). Initially for preliminary synthesis, tabulation was used to summarise characteristics of each included study

and their relevant findings. A thematic analysis was carried out on NVivo 14 (Lumivero, 2024) using Braun and Clarke's (2006) step-by-step guide to identify patterns and themes across the summarised data. Thematic analysis was chosen based on its suitability to answer the research question by synthesising qualitative data that explores autistic people's experiences (Clarke & Braun, 2017). After familiarisation with the data, CO generated initial codes and collated these into potential themes, which were then reviewed and refined in relation to the data. The primary supervisor (RR) and third author (AC) were consulted on the theme development and mapping of concepts. Concept mapping was then used to explore the relationships between the themes (Popay et al., 2006).

The synthesis was conducted from a critical realist stance, acknowledging that there is a true reality experienced by autistic people described in the data, but our understanding of this is influenced by the social context and experiences of the authors. Reflexivity was promoted through transparent documentation of the analysis process, consideration of author positionality, and peer debriefing, involving discussions with the lead reviewer's supervisor and co-authors.

Each finding was appraised by CO using the GRADE Confidence in the Evidence from Reviews of Qualitative research (GRADE-CERQual; Lewin et al., 2018) approach. The GRADE-CERQual assesses how much confidence to place in the review findings by considering four components: methodological limitations, relevance, coherence, and data adequacy. The methodological limitations of included studies were considered using the quality assessment findings, specifically by calculating the proportion of items rated 'Yes' on the CASP checklist across the studies included as part of a finding. The relevance, coherence, and data adequacy of findings were assessed following the completion of the thematic analysis. The review findings were then given a confidence rating of high, moderate, or low. To

further assess the robustness of this synthesis, the methodology and analysis are considered within the discussion.

Positionality

The lead author (CO) is an autistic Trainee Clinical Psychologist with lived experience of camouflaging and autistic burnout. Consultation with co-authors and reflexivity was utilised to navigate the balance between valuable insight through lived experience and potential bias in interpretations or decision making. This systematic review was carried out as part of CO's doctoral thesis, which also included conducting an empirical study looking at the impact of camouflaging in autistic adults. The second and last authors are Clinical Psychologists and form CO's supervisory team. The primary supervisor (RR) has previously worked in an NHS autism assessment service. The third author (AC) is a neurodivergent Trainee Clinical Psychologist with experience working clinically with neurodivergent populations.

Results

Description of Included Studies

The database searches identified 2,493 studies after duplicates were removed (see Figure 1). Following the title/abstract screening, 14 full texts were screened and 10 met the inclusion criteria. An additional four studies were identified through backward citation searching, meaning 14 studies in total were included in the review. Characteristics and textual descriptions of each individual study can be found tabulated in Table 3.

A total of 658 autistic individuals, 722 blogs or social media posts, and 39 vlogs were represented across the included studies (all summarised as participants from hereinafter). There were also 165 participants across the studies who were not autistic (Mantzalas et al., 2022; Miller et al., 2021); however, their qualitative data

Figure 1

PRISMA Flow Chart

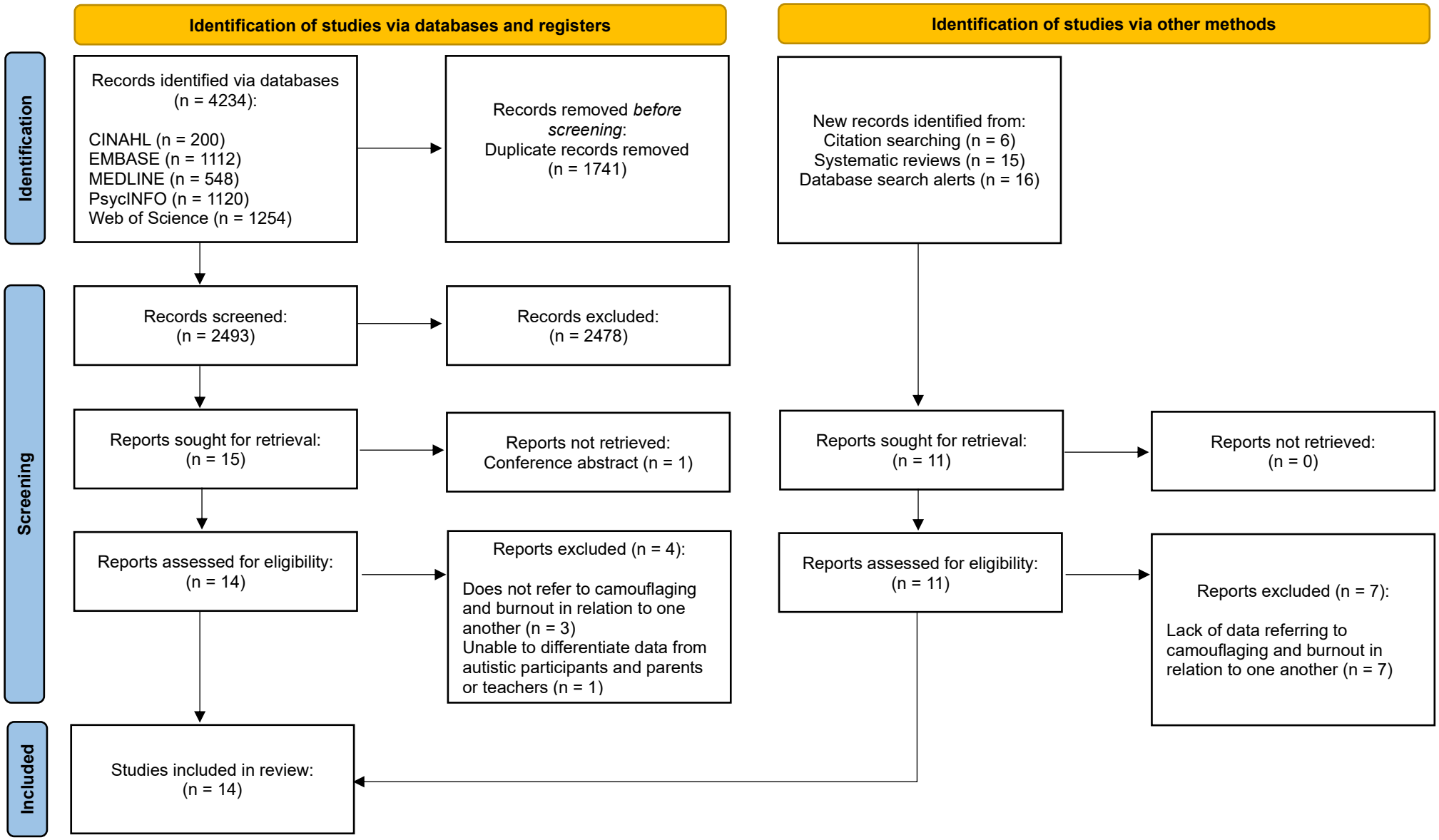


Table 3

Characteristics of Included Studies

Study information			Sample information			Analysis information	
Citation	Title	Country (data source)	Sample size (Mean age; Range/SD)	Gender	Autism diagnostic status	Analysis	Relevant themes and subthemes
Angulo et al. (2019)	Life Is a Stage: Autistic Perspectives on Neurotypicality	US (Online videos e.g. YouTube)	39 (24; range 13-45)[a]	13 women, 26 men[f]	Diagnosis[g]	Thematic analysis	**Neurotypicality as a masquerade** • Conscious effort to look/behave neurotypically • Acting neurotypical as an energy/time-consuming activity resulting in pain/burden • Need/ability to hide the Aspie/autistic side
Bargiela et al. (2016)	The Experiences of Late-diagnosed Women with Autism Spectrum Conditions: An Investigation of the Female Autism Phenotype	UK (Interviews)	14 (26.7; SD±2.3)	14 women	Diagnosed	Framework analysis	**Pretending to be 'normal'** • The costs of masking
Bradley et al. (2021)	Autistic Adults' Experiences of Camouflaging and Its Perceived Impact on Mental Health	UK (Online survey)	277 (38.6; SD±10.72)[b]	184 female, 93 male	128 diagnosed[h], 56 self-identifying	Thematic analysis	**Dangers of camouflaging** • It's exhausting **Why I don't need to camouflage like I used to** • Not since being diagnosed

Citation	Title	Country (data source)	Sample size (Mean age; Range/SD)	Gender	Autism diagnostic status	Analysis	Relevant themes and subthemes
Chapman et al. (2022)	"I want to fit in… but I don't want to change myself fundamentally": A qualitative exploration of the relationship between masking and mental health for autistic teenagers	UK (Interviews)	20 (15; range 13-19)	10 female, 10 male	Diagnosed	Thematic analysis	**A self-fulfilling prophecy** • Exhaustion • Suicidality
Finn et al. (2023)	'If I'm just me, I doubt I'd get the job': A qualitative exploration of autistic people's experiences in job interviews	Australia (Interviews)	10 (34.1; range 24-54)	5 women, 2 men, 3 non-binary	Diagnosed	Thematic analysis	**Mental and physical impacts of the job interview**
Harmens et al. (2022)	The Quest for Acceptance: A Blog-Based Study of Autistic Women's Experiences and Well-Being During Autism Identification and Diagnosis	UK (Blog posts)	20 (Uknown)	Unknown	19 diagnosed[i], 1 self-identifying	Thematic analysis	**Being accepted and understood by others** • Striving to fit in was painful/exhausting **Exhaustion** • Breaking points lead to identification
Higgins et al. (2021)	Defining autistic burnout through experts by lived experience: Grounded Delphi method investigating #AutisticBurnout	Australia (Online surveys)	23 (42.8; range 27-64)	16 female, 6 male, 1 non-binary	Diagnosed	Grounded Delphi method	**Energy** • Camouflaging-masking **Impact** • Increase autistic traits

Citation	Title	Country (data source)	Sample size (Mean age; Range/SD)	Gender	Autism diagnostic status	Analysis	Relevant themes and subthemes
Howe et al. (2023)	"Understanding camouflaging and identity in autistic children and adolescents using photo-elicitation"	Canada (Interviews)	8 (11.9; range 10-14)	3 female, 5 male	Diagnosed	Thematic analysis	**Consequences** • Stress • Needing time to recharge
Hull et al. (2017)	“Putting on My Best Normal”: Social Camouflaging in Adults with Autism Spectrum Conditions	UK (Online survey)	92 (43.1; range 18-79)[b]	55 female, 30 male, 7 other	Diagnosed	Thematic analysis	**“I fall to pieces”** • Drains my energy • I’m not my true self
Mantzalas et al. (2022)	What Is Autistic Burnout? A Thematic Analysis of Posts on Two Online Platforms	Australia (Online posts)	683 (41.4; range 21-76)[c]	61 female, 60 male, 3 not known	612 self-identified[j], 71 non-autistic	Thematic analysis	**Masking: Damned if you do, damned if you don’t**
Miller et al. (2021)	‘‘Masking Is Life’’: Experiences of Masking in Autistic and Nonautistic Adults	UK (Online survey)	238 (62.1; range 18-74)[b]	181 female, 35 male, 22 non-binary	144 self-identified autistic, 49 neurodivergent, 45 neurotypical	Thematic analysis	**“A huge emotional and physical toll”: Masking as a resource drain**

Citation	Title	Country (data source)	Sample size (Mean age; Range/SD)	Gender	Autism diagnostic status	Analysis	Relevant themes and subthemes
Pearson et al. (2023)	'I felt like I deserved it because I was autistic': Understanding the impact of interpersonal victimisation in the lives of autistic people	UK (Interviews)	102 (37.8; range 19-73)	64 female, 21 male, 14 non-binary, 1 two-spirit, 3 unsure	72 diagnosed, 30 self-identified	Thematic analysis	**Personhood revoked: the cost of living**
Raymaker et al. (2020)	"Having All of Your Internal Resources Exhausted Beyond Measure and Being Left with No Clean-Up Crew": Defining Autistic Burnout	US (Interviews and social media posts)	38[d] (37.3; range 21-65)[b,e]	10 female, 8 male, 4 other	Diagnosed[e]	Thematic analysis	**Life stressors** • Masking **Acceptance and social support** • Community support **Being autistic** • Unmasking **Self-knowledge** • ASD diagnosis • Understanding patterns and making strategic decisions
Tint & Weiss (2018)	A qualitative study of the service experiences of women with autism spectrum disorder	Canada (Focus groups)	20 (35.5; range 19-69)	20 women	Diagnosed	Thematic analysis	**Masking service needs** • Hidden hurt of maintaining the mask

[a] For 18 vloggers only; [b] Calculated from subsample data; [c] For 80 forum users only; [d] 19 interview participants and 19 social media posts; [e] For 19 interviewees only; [f] Authors' perceptions ; [g] Asperger's syndrome (*n*=20), autism (*n*=11), high-functioning autism (*n*=3), PDD-NOS (*n*=3), mild autism (*n*=1), borderline Asperger's syndrome (*n*=1); [h] High-functioning autism/Asperger's syndrome (*n*=176), autism (*n*=3), autism spectrum condition unspecified (*n*=16), PDD/PDD-NOS (*n*=2), other (*n*=9); [i] Asperger's syndrome (*n*=8), autism spectrum disorder (*n*=6), PDD-NOS (*n*=1), autism (*n*=9); [j] Assumed autistic status if users referred to themselves as autistic or used the #ActuallyAutistic hashtag.

could be differentiated from the autistic participants' or represented <15% of the total sample. Just the known data for autistic participants are reported here. Angulo et al.'s (2019) perceived participant characteristics have not been included in sample calculations as they cannot be confirmed. The total sample had an average reported age of 35.6 years (*n* = 871, range 10-79), and the reported genders consisted of 543 females, 263 males, and 45 non-binary/other individuals. Only one study reported participant sexual orientation (Pearson et al., 2023). There were 464 participants with a diagnosis of autism (with varying terms used) and, where reported, an average age of diagnosis as 32.9 years (*n* = 448, range 2-70). The remaining participants either self-identified as autistic or were classified by the researchers (e.g. social media posts with the hashtag #ActuallyAutistic).

Varying levels of data were collected from some studies about the participants' nationalities, country of residence, and race or ethnicity (Angulo et al., 2019; Finn et al., 2023; Harmens et al., 2022; Higgins et al., 2021; Howe et al., 2023; Hull et al., 2017; Pearson et al., 2023; Raymaker et al., 2020; Tint & Weiss, 2018). Most participants in those studies were reported as white or Caucasian, and identified as British, American, Australian, Canadian, or Western European. None of the studies reported on participant religion. In terms of socio-economic status, five studies reported occupation (Bargiela et al., 2016; Bradley et al., 2021; Finn et al., 2023; Higgins et al., 2021; Tint & Weiss, 2018), four studies reported attained education level (Finn et al., 2023; Higgins et al., 2021; Raymaker et al., 2020; Tint & Weiss, 2018), and one study reported class (Pearson et al., 2023). Most of those participants were employed or studying (81%) and had completed university level education (68%).

The most commonly reported comorbid conditions included depression (*n* = 284), anxiety (*n* = 261), learning disability or specific learning difficulty (*n* = 71), obsessive compulsive disorder (OCD; *n* = 45), attention-deficit hyperactivity disorder

(ADHD; *n* = 39), eating disorders (*n* = 28), chronic fatigue syndrome (*n* = 22), bipolar disorder (*n* = 20), and post-traumatic stress disorder (PTSD; *n* = 19). Only three studies reported on the autistic participants' support needs and communication methods (Bradley et al., 2021; Pearson et al., 2023; Raymaker et al., 2020). Three studies excluded participants on the basis of having an intellectual disability or IQ lower than 70 (Angulo et al., 2019; Chapman et al., 2022; Howe et al., 2023).

Quality Assessment

The CASP ratings for each included study can be found in Appendix E. Cohen's kappa was calculated to assess inter-rater reliability for the CASP ratings of 11 studies independently assessed by AC. The results indicated an acceptable agreement ($\kappa = 0.58$), with 16 discrepancies out of the 110 total dual rated items. The discrepancies were resolved through discussion. All of the studies passed the two screening questions on the CASP qualitative studies checklist (CASP, 2023) and therefore, no studies were excluded based on quality.

Data Synthesis

The thematic analysis revealed four overarching themes with two subthemes: 'the energy cost of camouflaging'; 'burnout: camouflaging takes its toll' with the subtheme 'too drained to disguise'; 'time and space to recharge' with the subtheme 'unmasking is a balancing act'; and 'the autistic struggle'. Supporting quotes for each of the themes and subthemes can be found in Appendix F.

The Energy Cost of Camouflaging

Autistic participants emphasised how camouflaging drains their energy, leaving them feeling "incredibly drained from having to mask" (Pearson et al., 2023, p. S3). They describe how camouflaging uses a lot of "brain power" (Finn et al., 2023, p. 2091), that their brain is "constantly working and ticking" (Bradley et al.,

2021, p. 324), and it is “very draining trying to figure out everything all the time” (Bargiela et al., 2016, p. 3287).

Several different analogies were used across studies to describe the energy cost of camouflaging. Participants from Bradley et al. (2021) expressed that its “like trying to solve mathematic equations in your head all day long while carrying on as normal” (p. 324) and “building patterns and sub-patterns to describe every situation based on every person” (p. 324). Similarly, one participant stated how “everything is more like on a manual, you’ve got to use one of those computers where you have to type every command in” (Bargiela et al., 2016, p. 3287). It was also likened to “studying for an exam, constantly on edge trying to predict what others will say and do” (Hull et al., 2017, p. 2527) and “being an actor on stage, without a break, for hours and hours every day” (Harmens et al., 2022, Supplementary Table 2).

Given the energy draining nature described, it makes sense that exhaustion was often expressed in relation to the experience of camouflaging. Participants describe how “it’s mentally exhausting constantly having to be something else” (Hull et al., 2017, p. 2529) and “it’s so tiring trying to constantly be on the ball” (Chapman et al., 2022, p. 12). Clementine from Pearson et al. (2023) expressed that they were “SOOO tired and worn out from pretending” (p. S3) and another participant simply exclaimed that “it is EXHAUSTING” (Bradley et al., 2021, p. 324).

Some participants described how camouflaging can cause almost a build-up of dysregulated or suppressed energy, causing a “mini crisis” (Howe et al., 2023, p. 10) or “meltdown” (Bradley et al., 2021, p. 325). They express getting to a point where they “break down” (Tint & Weiss, 2018, p. 931) and it “all just comes out…kinda like angry and tearful and annoyed and shouting” (Chapman et al., 2022, p. 12). Lidia from Pearson et al. (2023) talked about how running out of capacity to mask leads to a release of that built up energy:

> “When it [the mask] does disappear in a context where I don’t want it to, that looks like a meltdown (crying, yelling, etc). When I’m in contexts where I will need more mask, I have to budget my time because it is exhausting.” (p. S3)

Burnout: Camouflaging Takes its Toll

Participants describe how the toll of being “out of energy” (Angulo et al., 2019, p. 282) from camouflaging can “lead to a nasty case of burnout” (Mantzalas et al., 2022, p. 58). The cumulative effect was evident, such as Noelle’s experience: “I have been masking my entire life either for safety reasons or to enable myself to keep a job. Over time it has caused massive burnout…I haven’t fully recovered” (Pearson et al., 2023, p. S3). One participant suggests that:

> “Masking is a tool that should be used to get things nothing less, nothing more. Like with anything in life overdoing it leads to problems. With masking they can be quite serious burnout, forgetting who you are, constant anxiety from fear of slipping and being exposed.” (Mantzalas et al., 2022, p. 58)

Another participant from Raymaker et al. (2020) used a metaphor to demonstrate the cumulative impact of long-term camouflaging:

> “The metaphor I use is that long-term camouflaging and masking leaves behind a kind of psychic plaque in the mental and emotional arteries. Like the buildup of physical plaque over time can result in heart attack or stroke, the buildup of this psychic plaque over time can result in burnout.” (p. 139)

Other “damaging” (Bradley et al., 2021, p. 324) and “debilitating” (Bradley et al., 2021, p. 325) effects of camouflaging were expressed, with participants experiencing physical symptoms (Bradley et al., 2021, p. 325) and describing the impact on wellbeing: “I did my best to try and fit in and the resultant masking of my autistic traits played havoc with my wellbeing” (Harmens et al., 2022, Supplementary Table 2). Furthermore, they suggested that the toll of camouflaging

leads to feeling suicidal, that “it will be easier to not exist rather than to exist” (Chapman et al., 2022, p. 13). One participant expressed that “I didn’t learn that I only get suicidal during meltdowns until I removed all masking obligations. I spent 13 years burnt out’’ (Miller et al., 2021, p. 334).

It was “hard to function” (Howe et al., 2023, p. 10) after camouflaging, with participants needing to “shut down several days a week” (Bradley et al., 2021, p. 325) and not “leave the house” (Bradley et al., 2021, p. 325). One participant expressed being unable to do anything after camouflaging during social interaction: “Usually like I can’t do anything else for the rest of that day, I’m usually completely wiped out social wise” (Finn et al., 2023, p. 2091). This had an impact on their social life, as Norma describes: “Sometimes I can’t interact with friends and other people because I don’t have the strength to put on a mask.” (Pearson et al., 2023, p. S3). Maja described how this also impacts on work life:

> “There are weeks when I cannot go to work because I don’t function well enough… There are days when I won’t go out of my apartment because I’ve gotten so used to being accepted as normal, so I can’t face the world when I am an Aspie.” (Angulo et al., 2019, p. 282).

Camouflaging led to a sense of feeling disconnected from their true selves: “It’s mentally exhausting constantly having to be something else, literally never being able to be myself, and kind of sad too I guess?” (Hull et al., 2017, p. 2529). They described the impact of having “to change how you exist to make it all work” (Higgins et al., 2021, p. 2361), such as blogger four’s experience in Harmens et al. (2022), “I became so many different people that I felt I’d lost any sense of my own identity” (p. 48). Scott expressed how masking had caused a disconnect from their authentic self, in turn relating to the exhausting nature of social interactions and lack of purpose:

> “I’ve spent so long masking to fit in that I can’t tell what my authentic self is. I like movies and tv shows and I look forward to watching them. I practice qi gong. Solitary pursuits. Being around other people leaves me exhausted. I lack any sense of purpose and I dread going to work.” (Pearson et al., 2023, p. S3)

This also affected their social identity and how they experience relationships, as one participant describes: “If people don’t see the real you they can’t love the real you. It alienates you from people; even as it seems your relationships with people are improving, the amount of joy you derive from it decreases” (Mantzalas et al., 2022, p. 58).

Too Drained to Disguise

As part of the toll that camouflaging takes, the autistic participants’ ability to continue camouflaging itself is reduced. Participants expressed “taking the mask off” (Mantzalas et al., 2022, p. 60) and camouflaging less because they have “nothing left and can’t uphold this masquerade” (Angulo et al., 2019, p. 282). They described how it “takes too much energy to try and hide” (Bradley et al., 2021, p. 326) and so they “couldn’t keep acting the way people expected” (Higgins et al., 2021, p. 2361). Lidia talked about days when they have less energy they “will automatically have less mask available” (Pearson et al., 2023, p. S3). One participant described how they couldn’t keep camouflaging and now it is more difficult to do so: “I was simply unable to keep masking my autism, and there’s no putting the lid on again (nor would I want to)” (Mantzalas et al., 2022, p. 60). Jasmine shared how an abusive relationship contributed to burnout and caused her to lose the ability to mask:

> “I was that girl crying on the bus because she couldn’t control herself in public, I lost the mask, the trauma made the mask drip, that I couldn’t control

> myself in public, and I'm very good at putting the stone face on and getting through" (Pearson et al., 2023, p. S3).

Time and Space to Recharge

Participants expressed needing to take time to "recharge" (Bradley et al., 2021, p. 325) and "recover" (Bradley et al., 2021, p. 325). Cher described in Angulo et al. (2019) that it's like "flexing a muscle repeatedly, in that you get tired out…need to shut in and recover…let that muscle heal" (p. 282). Cher then goes on to emphasise the importance of self-advocating to others the need for alone time: "You need to be able to go to people and say, 'I have Asperger's syndrome, and right now I need some time alone. I still love you. I still care about you, but I need a day to me" (p. 282). Another participant expressed "I need to just shut down and take some time to rebuild back up before I can face the next task for the day" (Finn et al., 2023, p. 2091).

Participants from Higgins et al. (2021) described that "I needed that time to recover and be myself unfiltered" (p. 2361) and "I would just sit and cut pieces of leather into strips for hours on end, alone and in silence" (p. 2361). Ten-year-old Lisa expressed how her fidget toy collection "helped to calm me down after a long day of masking and stuff" (Howe et al., 2023, p. 11).

Unmasking is a Balancing Act

A commonly suggested method of recovering from autistic burnout and recharging energy levels was unmasking. One participant stated that "masking is a skill but can feel like a curse. We need to remind ourselves to unmask, otherwise we risk burning out. And we deserve better" (Mantzalas et al., 2022, p. 60). Raymaker et al. (2020) quote another autistic person's suggestion to unmask:

> "The biggest thing of all you can do to prevent, or at least mitigate burnout, is to start identifying what you do when you Mask and stop. Even just little

things like eye contact, which so many of us do, or at least pretend to do." (p. 138)

Other methods of unmasking are proposed, such as one participant's suggestion to take stimming breaks: "Stimming is the autistic way of dealing with stress. Even a few minutes here and there in the bathroom could be of help" (Mantzalas et al., 2022, p. 59). Another participant recommends to "allow yourself not to be sociable if you don't want to be. Give yourself permission to duck out of situations you can't cope with instead of pretending you can" (Raymaker et al., 2020, p. 138).

There was a sense of needing to be themselves and "unfiltered" (Higgins et al., 2021, p. 2361), feeling "the need to seek solitude so I can 'be myself'" (Hull et al., 2017, p. 2527). Carter described how "I can now, as a recluse, be myself…but before, it was all masking, all exhausting, all identity-denying" (Pearson et al., 2023, p. 505). When describing how their burnout was prevented, one participant talked about being "around some communities of people who were generally more accepting of "quirkiness," and so provided some periods of time where I likely was needing to mask less, or less intensely" (Raymaker et al., 2020, p. 138).

However, unmasking was not always the solution as their "chameleon skills were a double-edged sword" (Harmens et al., 2022, p. 48) and were needed for some situations. One participant expressed feeling "glad that the camouflaging enables me to survive within myself and accomplish any necessary tasks" (Hull et al., 2017, p. 2527). Though the authors did note that a higher proportion of male participants reported positive consequences from camouflaging than female participants, suggesting a potential gender difference (Hull et al., 2017).

The concept of unmasking is complex, as demonstrated by Lidia's perspective that masking "is a survival skill I have adapted and cannot turn off. It is

a hard-won battle scar that deflects potential future pain" (Pearson et al., 2023, p. 505). Referring to their experience of camouflaging less, one participant describes how "it's still a complex set of relations that underpin this change" (Mantzalas, et al., 2022, p. 60). Some participants reported having a negative experience of unmasking; for example, George expressed that "the second I stopped masking at work due to autistic burnout, I was severely ostracised" (Pearson et al., 2023, p. S3).

The Autistic Struggle

The idea that the experience of camouflaging is stronger or more intense for autistic people was recognised:

> ''I think that everyone, neurotypical or not, camouflage their real selves in one way or another. But, for autistics, we have to camouflage all the time, even with people we know pretty well, or our families, and the consequences associated with it are much more deeply felt by autistics than neurotypicals'' (Bradley et al., 2021, p. 324)

Participants described how other people do not recognise the toll that camouflaging has on them, expressing how "people praise us for what we are capable of and what we have achieved thanks to our performance…but no one stops to consider the toll it takes on us" (Higgins et al., 2021, p. 2361). One participant reported that "I get told by everyone that I seem to be managing my autism well…but the constant masking at work is exhausting and I ended up in burnout this weekend" (Mantzalas, et al., 2022, p. 58). Another participant shared that:

> "I'm not one to make a scene. I don't even want to be in a scene! I try to always be behind the scenes! So, to the outside observer I'm sure I look

passable - no one is going to expect that inside I'm driving myself crazy" (Tint & Weiss, 2018, p. 931).

The hidden impact of camouflaging also meant that others did not believe their diagnosis or requested they kept masking: "I have encountered some people who either will not believe my diagnosis or who take the attitude that if I could conceal my traits before, then there is no reason why I shouldn't continue to" (Mantzalas, et al., 2022, p. 60).

A seemingly unique impact of camouflaging for autistic people was related to seeking a diagnosis, which was difficult for some participants because "when you have worked so hard to hold yourself together for so long, it is not easy to submit yourself to a process. We often worry that assessors are trying to trick us, to catch us out" (Harmens et al., 2022, p. 48). However, receiving a diagnosis was felt to prevent autistic burnout through reducing camouflaging: "What potentially could have helped prevent burnout would have been an earlier diagnosis, which potentially could have meant less need to camouflage" (Raymaker et al., 2020, p. 139).

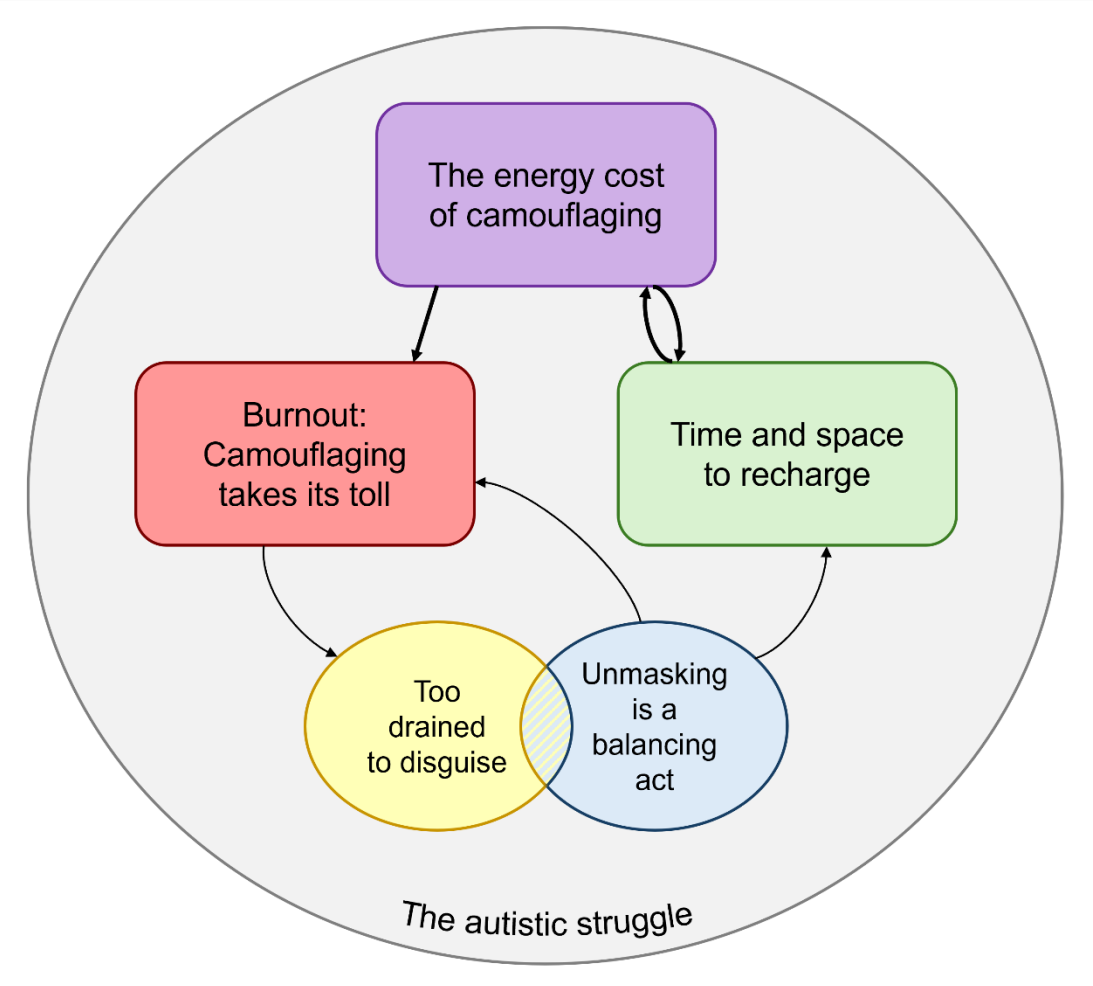
Exploring Relationships Between Themes

Concept mapping was used to illustrate the relationships between themes and subthemes (see Figure 2). This map shows how the 'energy cost of camouflaging' leads to 'burnout: camouflaging takes its toll', which also results in being 'too drained to mask'. The 'energy cost of camouflaging' has a bi-directional relationship with needing 'time and space to recharge', whereby camouflaging depletes energy and necessitates recovery, while recharging replenishes energy, enabling further camouflaging. The subtheme 'unmasking is a balancing act' feeds into both 'time and space to recharge' and 'burnout: camouflaging takes its toll' to reflect the complexities of unmasking and the range of consequences. The overlap

between being ‘too drained to disguise’ and ‘unmasking is a balancing act’ demonstrates how burnout can force unmasking but may have the same implications as intentional unmasking. The full map is held within the context of ‘the autistic struggle’ to highlight the unique but overlooked experiences of autistic people.

Figure 2

Concept Map of Themes and Subthemes



Confidence in the Review Findings

The GRADE-CERQual (Lewin et al., 2018) was used to assess confidence in the themes (and subthemes) revealed through the data synthesis (see Appendix G). Two findings (‘the energy cost of camouflaging’ and ‘unmasking is a balancing act’) were rated as high confidence and the remaining four findings were rated as moderate confidence. This suggests that it is either highly likely (for high confidence) or likely (for moderate confidence) that the findings are a reasonable representation of autistic people’s experience of camouflaging and autistic burnout in relation to one another.

Discussion

Whilst an association between camouflaging and autistic burnout has been described by autistic people, there have been limitations to empirically measuring this. This systematic review aimed to understand how camouflaging and autistic burnout are experienced in relation to one another by autistic people. A thematic analysis of qualitative data from included studies found four themes, with two subthemes: ‘the energy cost of camouflaging’; ‘burnout: camouflaging takes its toll’ with the subtheme ‘too drained to disguise’; ‘time and space to recharge’ with the subtheme ‘unmasking is a balancing act’; and ‘the autistic struggle’. The relationships between these themes were explored using concept mapping.

The finding that camouflaging is energy draining and exhausting is in line with previous research. A meta-ethnography on the experiences of social camouflaging and its relationship with mental health also identified the cognitively demanding and draining nature of camouflaging, leading to unintended consequences (Field et al., 2024). Contrastingly, some studies within Field et al. (2024) identified camouflaging strategies as more ‘automatic’ or ‘habitual’, potentially conflicting with the effortful nature. Though, it may be that ‘automatic’

camouflaging reflects a learned trauma response (Cleary et al., 2023) as protection from stigma (Radulski, 2022), which in itself is exhausting (Botha & Frost, 2020; Leedham et al., 2020). The mention of meltdowns and the build-up of suppressed energy supports that the impact of camouflaging may occur in relation to a multi-faceted construct of autistic people's experiences of dysregulation, in line with previous findings on the experiences of burnout, inertia, meltdowns, and shutdown (BIMS; Phung et al., 2021; Welch et al., 2021).

This review supports that the toll of camouflaging leads to autistic burnout (Stanich, 2024). This is in line with the findings of a previous systematic review on the psychosocial consequences of camouflaging for mental wellbeing, which found that participants across the studies linked camouflaging to exhaustion and autistic burnout (Zhuang et al., 2023). Camouflaging was suggested to have a direct impact on reduced functioning, interpersonal withdrawal, and suicidality; this strengthens the link between camouflaging and autistic burnout as a construct (Mantzalas et al., 2022; Raymaker et al., 2020), rather than just exhaustion. Autistic burnout was suggested to reduce camouflaging ability, supporting previous findings that camouflaging is unsustainable (J. Cook et al., 2021). This is in line with Giroux et al.'s (2024) conceptual model which suggests that the use of camouflaging is decided through an interaction between personal costs and potential social gain, by which one could infer that the personal cost during autistic burnout would take precedence and result in the forgoing of camouflaging.

Although the search strategy was focussed on known definitions of autistic burnout, the impact of camouflaging on sense of self was highlighted within the data. The negative impact that camouflaging can have on identity and self-authenticity is known within the literature (Klein & Macoun, 2025; Lilley et al., 2022; Seers & Hogg, 2023). This finding suggests that the disconnection from self may have been omitted from current definitions of autistic burnout and may factor into its

cause or presentation, further adding context to its relationship with camouflaging. This is supported by Pearson and Rose's (2021) conceptual model which illustrates how camouflaging can lead to breaking point through the disconnection from identity or internal cues. Further to Field et al.'s (2024) findings, it may be that more 'automatic' camouflaging leads to autistic burnout indirectly through disconnection to self and inauthenticity, as demonstrated by Pearson and Rose (2021), rather than the directly exhausting effect of cognitively demanding strategies, as would be suggested by the dual process theory (J. S. B. T. Evans & Stanovich, 2013).

The need to recharge and recover after camouflaging was identified, parallel to previous research suggesting that taking time to recharge is helpful in managing autistic burnout (Higgins et al., 2021; Neville et al., 2024). Proposed methods of recharging after camouflaging included stimming, alone time, and engaging in enjoyed activities. Whilst this supports findings that stimming, social withdrawal, and engaging in special interests can be helpful (Neville et al., 2024; Pritchard-Rowe et al., 2024), these methods may also be unhelpful and exacerbate autistic burnout through social and environmental factors (such as stigma) and increased personal demands (such as hyperfocus; Mantzalas et al., 2022). Specifically, the complexities of unmasking as a method for recovery were presented, supporting that unmasking can be beneficial (Raymaker et al., 2020), but that camouflaging can be a helpful resource (Livingston et al., 2019; Mantzalas et al., 2022) and that it may be unsafe for autistic people to unmask (Cage & Troxell-Whitman, 2019; Cleary et al., 2023; Radulski, 2022).

The finding that the impact of camouflaging is stronger and overlooked in autistic people is supported by quantitative research, which has found higher rates of camouflaging in autistic people compare to non-autistic people (Belcher et al., 2022; S. A. Cassidy et al., 2021; Hull et al., 2020a; Jedrzejewska & Dewey, 2022). Where studies have found no differences in camouflaging by diagnosis, higher

camouflaging was associated with autistic traits (Bernardin, Lewis, et al., 2021; Livingston et al., 2020). Camouflaging predicts poorer psychological quality of life for autistic people but not non-autistic people (Milner, Mandy, et al., 2023); however, a stronger impact of camouflaging for autistic people has not been found in all studies (Hull et al., 2019). This review found that camouflaging may delay identification of autism and prevent support needs being believed or met, which is supported by other findings associating camouflaging with delayed diagnosis (A. Cook et al., 2018; McQuaid et al., 2022) and autistic burnout through lack of support (Livingston et al., 2019).

Limitations

The majority of participants (where recorded) were white or Caucasian from an Anglo culture, had attained university-level education, with the cognitive ability to take part through self-report. Only two studies, accounting for just 28 participants, purposively collected data from children and adolescents (Chapman et al., 2022; Howe et al., 2023). Therefore, the findings of this review may not be representative of the autistic population, with data lacking from children and adolescents, those with a learning disability and/or high support needs, non-binary and other gendered individuals, and people from ethnically diverse backgrounds. Representation is a common limitation in camouflaging research (Libsack et al., 2021; Zhuang et al., 2023) as most studies are based within Western, Educated, Industrialized, Rich and Democratic (WEIRD) societies (Henrich et al., 2010). Additionally, a higher proportion of participants were female which conflicts with the male majority autistic population (Loomes et al., 2017), potentially reflecting sampling bias in camouflaging and autistic burnout research (Rødgaard et al., 2022).

Whilst a high inter-rater reliability was calculated during screening, not all studies were independently rated by a second reviewer and therefore, conclusions about the robustness of the search strategy and screening criteria are limited. The

thematic analysis did not utilise dual coding and was predominantly conducted by the lead reviewer, subsequently increasing the risk of interpretation bias. Attempts to mitigate this included transparency, detailed documentation, and consultation with the primary supervisor and third author. The synthesis findings are also subject to potential risk of bias through the use of secondary data already influenced by previous author interpretation, as opposed to primary data provided by autistic participants themselves. Robustness of the synthesis could have been further assessed by liaising with the study authors about the interpretation of the included data.

There is no previous research looking directly at how camouflaging and autistic burnout are experienced in relation to one another. Whilst addressing this gap is a strength of the current review, the lack of direct research means the data collected was limited and circumstantial. Autistic burnout is still being conceptualised and therefore, we cannot be certain that the search strategy captured all studies with related data or that the analysis did not include data related to other overlapping constructs, such as depression. Autistic burnout is a multi-faceted experience, and the search strategy focus on exhaustion and reduced functioning may have omitted other potentially related factors, such as confusion, memory loss, and increased autistic traits. This review was still important despite this limitation to align our current understanding and research with the experiences described by autistic people through synthesising circumstantial data, whilst further contributing to the refinement and conceptualisation of autistic burnout.

Implications

This review presents a conceptual model that delineates the relationships between camouflaging and autistic burnout, emphasising the dynamic nature of energy depletion and replenishment, perpetuating consequences on wellbeing, and complexities of unmasking. While previous research has identified the exhausting

nature of camouflaging (Zhuang et al., 2023) and links with negative mental health outcomes (Khudiakova et al., 2024), this model integrates these processes within a structured framework. The exploratory nature of this review offers relationships to be empirically tested through further research, aiming to refine the proposed mechanisms and consider additional influential factors. Specifically future studies should aim to more directly explore how autistic people experience camouflaging and autistic burnout in relation to one another. Given the overlapping nature of burnout, inertia, meltdowns, and shutdowns (Phung et al., 2021), this could be advanced by exploring the relationship between camouflaging and each of the BIMS. Exploration of autistic burnout should consider the role of sense of self in the experience, whether it is a casual factor in its development or just an association. It could be valuable to explore potential gender differences in how camouflaging and autistic burnout are experienced in relation to one another, and the impact of this dynamic relationship on the autism diagnostic process. This research should also aim to be inclusive of autistic people with varying cognitive abilities and from a range of ethnically diverse and socioeconomic backgrounds.

The review found that camouflaging can lead to autistic burnout and, although unmasking can be helpful in prevention or recovery, there are complexities to its safety due to the threat of stigma and discrimination that autistic people face. Therefore, promoting autism acceptance and shifting the societal context, albeit overtime, should help alleviate the burden on autistic people to continue camouflaging. This shift should include accommodating environments which will help to reduce stigma through integrating autistic people and supporting them to be authentically themselves (Turnock et al., 2022). Further, this would support autistic people in getting their needs met by reducing the hidden nature of autistic traits due to camouflaging, as well as enhancing the person-environment fit (Klein & Macoun, 2025), subsequently preventing that route into autistic burnout.

Autistic burnout and the impact of camouflaging should be considered when autistic people present with depressive symptoms and suicidality. Clinicians should be informed by the findings emphasising the energy draining nature of camouflaging and the need to recharge when offering support to autistic people in autistic burnout. Typically suggested interventions and support, such as increasing activity level and social engagement, may be unhelpful and counteractive. Instead, the nature of interventions should be considered by professionals, accounting for camouflaging demands and safety to unmask. For example, promoting engagement with other autistic people can enable autistic people to feel safe and accepted as their authentic selves, allowing a sense of comfort and belonging with reduced exhaustion (J. Cook et al., 2021; Crompton, Hallett, et al., 2020; Howard & Sedgewick, 2021).

Conclusion

Understanding how camouflaging and autistic burnout are experienced in relation to one another by autistic people is crucial in conceptualising the experiences of camouflaging and autistic burnout. This review highlighted the energy draining and exhausting nature of camouflaging that may explain its progression to autistic burnout unless time isn't taken to recharge. Camouflaging is experienced as unsustainable and subsequent autistic burnout can force unmasking which, like proactive unmasking, leads to conflicting outcomes. These findings have implications for clinicians working with autistic adults, emphasising the role of camouflaging in autistic burnout. Further research is indicated to directly explore how camouflaging and autistic burnout are experienced in relation to one another, and work is needed at a societal level to improve the stigma and safety for autistic people to be authentically themselves.

References

Anderson, J., Marley, C., Gillespie-Smith, K., Carter, L., & MacMahon, K. (2020). When the mask comes off: Mothers' experiences of parenting a daughter with autism spectrum condition. *Autism*, *24*(6), 1546–1556. https://doi.org/10.1177/1362361320913668

Angulo, H., Chan, M., & DeThorne, L. (2019). Life Is a Stage: Autistic Perspectives on Neurotypicality. *Autism in Adulthood: Challenges and Management*, *1*(4), 276–285. https://doi.org/10.1089/aut.2019.0024

Arnold, S. R., Higgins, J. M., Weise, J., Desai, A., Pellicano, E., & Trollor, J. N. (2023a). Confirming the nature of autistic burnout. *Autism*, *27*(7), 1906–1918. https://doi.org/10.1177/13623613221147410

Arnold, S. R., Higgins, J. M., Weise, J., Desai, A., Pellicano, E., & Trollor, J. N. (2023b). Towards the measurement of autistic burnout. *Autism*, *27*(7), 1933–1948. https://doi.org/10.1177/13623613221147401

Bargiela, S., Steward, R., & Mandy, W. (2016). The experiences of late-diagnosed women with autism spectrum conditions: An investigation of the female autism phenotype. *Journal of Autism and Developmental Disorders*, *46*(10), 3281–3294. https://doi.org/10.1007/s10803-016-2872-8

Belcher, H. L., Morein-Zamir, S., Mandy, W., & Ford, R. M. (2022). Camouflaging Intent, First Impressions, and Age of ASC Diagnosis in Autistic Men and Women. *Journal of Autism and Developmental Disorders*, *52*(8), 3413–3426. https://doi.org/10.1007/s10803-021-05221-3

Bernardin, C. J., Lewis, T., Bell, D., & Kanne, S. (2021). Associations between social camouflaging and internalizing symptoms in autistic and non-autistic adolescents. *Autism: The International Journal of Research and Practice*, *25*(6), 1580–1591. https://doi.org/10.1177/1362361321997284

Boren, R. (2017, January 26). Autistic Burnout: The Cost of Masking and Passing. *Stimpunks Foundation*. https://stimpunks.org/burnout/

Botha, M., & Frost, D. M. (2020). Extending the Minority Stress Model to Understand Mental Health Problems Experienced by the Autistic Population. *Society and Mental Health*, *10*(1), 20–34. https://doi.org/10.1177/2156869318804297

Bradley, L., Shaw, R., Baron-Cohen, S., & Cassidy, S. (2021). Autistic adults' experiences of camouflaging and its perceived impact on mental health. *Autism in Adulthood*, *3*(4), 320–329. https://doi.org/10.1089/aut.2020.0071

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cage, E., & McManemy, E. (2022). Burnt Out and Dropping Out: A Comparison of the Experiences of Autistic and Non-autistic Students During the COVID-19 Pandemic. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.792945

Cage, E., & Troxell-Whitman, Z. (2019). Understanding the reasons, contexts and costs of camouflaging for autistic adults. *Journal of Autism and Developmental Disorders*, *49*(5), 1899–1911. https://doi.org/10.1007/s10803-018-03878-x

Cassidy, S. A., Bradley, L., Cogger-Ward, H., & Rodgers, J. (2021). Development and validation of the suicidal behaviours questionnaire—Autism spectrum conditions in a community sample of autistic, possibly autistic and non-autistic adults. *Molecular Autism*, *12*(1), 46. https://doi.org/10.1186/s13229-021-00449-3

Chapman, L., Rose, K., Hull, L., & Mandy, W. (2022). "I want to fit in… but I don't want to change myself fundamentally": A qualitative exploration of the relationship between masking and mental health for autistic teenagers.

Research in Autism Spectrum Disorders, *99*, 102069. https://doi.org/10.1016/j.rasd.2022.102069

Clarivate. (2023). *EndNote* (Version 21) [Computer software]. Clarivate. https://endnote.com/

Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, *12*(3), 297–298. https://doi.org/10.1080/17439760.2016.1262613

Cleary, M., West, S., Kornhaber, R., & Hungerford, C. (2023). Autism, Discrimination and Masking: Disrupting a Recipe for Trauma. *Issues in Mental Health Nursing*, *44*(9), 799–808. https://doi.org/10.1080/01612840.2023.2239916

Cook, A., Ogden, J., & Winstone, N. (2018). Friendship motivations, challenges and the role of masking for girls with autism in contrasting school settings. *European Journal of Special Needs Education*, *33*(3), 302–315. https://doi.org/10.1080/08856257.2017.1312797

Cook, J., Crane, L., Bourne, L., Hull, L., & Mandy, W. (2021). Camouflaging in an everyday social context: An interpersonal recall study. *Autism*, *25*(5), 1444–1456. https://doi.org/10.1177/1362361321992641

Cook, J., Crane, L., Hull, L., Bourne, L., & Mandy, W. (2022). Self-reported camouflaging behaviours used by autistic adults during everyday social interactions. *Autism*, *26*(2), 406–421. https://doi.org/10.1177/13623613211026754

Critical Appraisal Skills Programme. (2023). *CASP Qualitative Checklist*. https://casp-uk.net/casp-tools-checklists/qualitative-studies-checklist/

Crompton, C. J., Hallett, S., Ropar, D., Flynn, E., & Fletcher-Watson, S. (2020). 'I never realised everybody felt as happy as I do when I am around autistic people': A thematic analysis of autistic adults' relationships with autistic and neurotypical friends and family. *Autism*, *24*(6), 1438–1448. https://doi.org/10.1177/1362361320908976

Endow, J. (2015, July 6). ‘Autistic Burnout’ by Judy Endow, MSW. *Ollibean*. https://ollibean.org/autistic-burnout/

Evans, J. S. B. T., & Stanovich, K. E. (2013). Dual-Process Theories of Higher Cognition: Advancing the Debate. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science*, *8*(3), 223–241. https://doi.org/10.1177/1745691612460685

Ferguson, A., Martin, D., & Pearson, A. (2024). “It Has Shown Me How Much I Am Capable Of”: An Exploration of Autistic Burnout Experiences in Motherhood. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0282

Field, S. L., Williams, M. O., Jones, C. R. G., & Fox, J. R. E. (2024). A meta-ethnography of autistic people’s experiences of social camouflaging and its relationship with mental health. *Autism*, *28*(6), 1328–1343. https://doi.org/10.1177/13623613231223036

Finn, M., Flower, R. L., Leong, H. M., & Hedley, D. (2023). ‘If I’m just me, I doubt I’d get the job’: A qualitative exploration of autistic people’s experiences in job interviews. *Autism*, *27*(7), 2086–2097. https://doi.org/10.1177/13623613231153480

Giroux, M., Courcy, I., & Nadig, A. (2024). Social camouflage in autism: An analysis of decision making. *Autism in Adulthood*. https://doi.org/10.1089/aut.2023.0077

Harmens, M., Sedgewick, F., & Hobson, H. (2022). The quest for acceptance: A blog-based study of autistic women’s experiences and well-being during autism identification and diagnosis. *Autism in Adulthood*, *4*(1), 42–51. https://doi.org/10.1089/aut.2021.0016

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *The Behavioral and Brain Sciences*, *33*(2–3), 61–83; discussion 83-135. https://doi.org/10.1017/S0140525X0999152X

Higgins, J. M., Arnold, S. R., Weise, J., Pellicano, E., & Trollor, J. N. (2021). Defining autistic burnout through experts by lived experience: Grounded Delphi method investigating #AutisticBurnout. *Autism*, *25*(8), 2356–2369. https://doi.org/10.1177/13623613211019858

Howard, P. L., & Sedgewick, F. (2021). 'Anything but the phone!': Communication mode preferences in the autism community. *Autism*, *25*(8), 2265–2278. https://doi.org/10.1177/13623613211014995

Howe, S. J., Hull, L., Sedgewick, F., Hannon, B., & McMorris, C. A. (2023). Understanding camouflaging and identity in autistic children and adolescents using photo-elicitation. *Research in Autism Spectrum Disorders*, *108*, 102232. https://doi.org/10.1016/j.rasd.2023.102232

Hull, L., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., Petrides, K., & Mandy, W. (2020). Gender differences in self-reported camouflaging in autistic and non-autistic adults. *Autism*, *24*(2), 352–363. https://doi.org/10.1177/1362361319864804

Hull, L., Mandy, W., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the camouflaging autistic traits questionnaire (cat-q). *Journal of Autism and Developmental Disorders*, *49*(3), 819–833. https://doi.org/10.1007/s10803-018-3792-6

Hull, L., Petrides, K. V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M.-C., & Mandy, W. (2017). "Putting on My Best Normal": Social Camouflaging in Adults with Autism Spectrum Conditions. *Journal of Autism and Developmental Disorders*, *47*(8), 2519–2534. https://doi.org/10.1007/s10803-017-3166-5

Jedrzejewska, A., & Dewey, J. (2022). Camouflaging in Autistic and Non-autistic Adolescents in the Modern Context of Social Media. *Journal of Autism and Developmental Disorders*, *52*(2), 630–646. https://doi.org/10.1007/s10803-021-04953-6

Khudiakova, V., Russell, E., Sowden-Carvalho, S., & Surtees, A. D. R. (2024). A systematic review and meta-analysis of mental health outcomes associated with camouflaging in autistic people. *Research in Autism Spectrum Disorders*, *118*, 102492. https://doi.org/10.1016/j.rasd.2024.102492

Klein, J., & Macoun, S. J. (2025). Person-environment fit and social camouflaging in autism. *New Ideas in Psychology*, *76*, 101112. https://doi.org/10.1016/j.newideapsych.2024.101112

Knott, F., & Taylor, A. (2014). Life at university with Asperger syndrome: A comparison of student and staff perspectives. *International Journal of Inclusive Education*, *18*(4), 411–426. https://doi.org/10.1080/13603116.2013.781236

Leedham, A., Thompson, A. R., Smith, R., & Freeth, M. (2020). 'I was exhausted trying to figure it out': The experiences of females receiving an autism diagnosis in middle to late adulthood. *Autism*, *24*(1), 135–146. https://doi.org/10.1177/1362361319853442

Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., Bohren, M. A., Tunçalp, Ö., Colvin, C. J., Garside, R., Carlsen, B., Langlois, E. V., & Noyes, J. (2018). Applying GRADE-CERQual to qualitative evidence synthesis findings: Introduction to the series. *Implementation Science*, *13*(1), 2. https://doi.org/10.1186/s13012-017-0688-3

Libsack, E. J., Keenan, E. G., Freden, C. E., Mirmina, J., Iskhakov, N., Krishnathasan, D., & Lerner, M. D. (2021). A Systematic Review of Passing as Non-autistic in Autism Spectrum Disorder. *Clinical Child and Family Psychology Review*, *24*(4), 783–812. https://doi.org/10.1007/s10567-021-00365-1

Lilley, R., Lawson, W., Hall, G., Mahony, J., Clapham, H., Heyworth, M., Arnold, S. R., Trollor, J. N., Yudell, M., & Pellicano, E. (2022). 'A way to be me': Autobiographical reflections of autistic adults diagnosed in mid-to-late

adulthood. *Autism*, *26*(6), 1395–1408. https://doi.org/10.1177/13623613211050694

Livingston, L. A., Shah, P., & Happé, F. (2019). Compensatory strategies below the behavioural surface in autism: A qualitative study. *The Lancet Psychiatry*, *6*(9), 766–777. https://doi.org/10.1016/S2215-0366(19)30224-X

Livingston, L. A., Shah, P., Milner, V., & Happé, F. (2020). Quantifying compensatory strategies in adults with and without diagnosed autism. *Molecular Autism*, *11*(1), 15. https://doi.org/10.1186/s13229-019-0308-y

Loomes, R., Hull, L., & Mandy, W. P. L. (2017). What is the male-to-female ratio in autism spectrum disorder? A systematic review and meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry*, *56*(6), 466–474. https://doi.org/10.1016/j.jaac.2017.03.013

Lumivero. (2024). *NVivo* (Version 14) [Computer software]. https://lumivero.com/products/nvivo/

Mantzalas, J., Richdale, A. L., Adikari, A., Lowe, J., & Dissanayake, C. (2022). What is autistic burnout? A thematic analysis of posts on two online platforms. *Autism in Adulthood: Challenges and Management*, *4*(1), 52–65. https://doi.org/10.1089/aut.2021.0021

Mantzalas, J., Richdale, A. L., & Dissanayake, C. (2022). A conceptual model of risk and protective factors for autistic burnout. *Autism Research*, *15*(6), 976–987. https://doi.org/10.1002/aur.2722

Mantzalas, J., Richdale, A. L., Li, X., & Dissanayake, C. (2024). Measuring and validating autistic burnout. *Autism Research*, *17*(7), 1417–1449. https://doi.org/10.1002/aur.3129

Mason, H. (2024). *Autistic burnout: Exploring autistic perspectives on treatment availability and effectiveness*. https://dc.arcabc.ca/islandora/object/dc:59726

McQuaid, G. A., Lee, N. R., & Wallace, G. L. (2022). Camouflaging in autism spectrum disorder: Examining the roles of sex, gender identity, and

diagnostic timing. *Autism*, *26*(2), 552–559. https://doi.org/10.1177/13623613211042131

Miller, D., Rees, J., & Pearson, A. (2021). “Masking Is Life”: Experiences of Masking in Autistic and Nonautistic Adults. *Autism in Adulthood: Challenges and Management*, *3*(4), 330–338. https://doi.org/10.1089/aut.2020.0083

Milner, V., Mandy, W., Happé, F., & Colvert, E. (2023). Sex differences in predictors and outcomes of camouflaging: Comparing diagnosed autistic, high autistic trait and low autistic trait young adults. *Autism*, *27*(2), 402–414. https://doi.org/10.1177/13623613221098240

Miserandino, C. (2013, April 25). The Spoon Theory written by Christine Miserandino. *But You Dont Look Sick? Support for Those with Invisible Illness or Chronic Illness*. https://butyoudontlooksick.com/articles/written-by-christine/the-spoon-theory/

Neville, F., Sedgewick, F., McClean, S., White, J., & Bray, I. (2024). Reacting, Retreating, Regulating, and Reconnecting: How Autistic Adults in the United Kingdom Use Time Alone for Well-Being. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0148

Noyes, J., Booth, A., Flemming, K., Garside, R., Harden, A., Lewin, S., Pantoja, T., Hannes, K., Cargo, M., & Thomas, J. (2018). Cochrane Qualitative and Implementation Methods Group guidance series—paper 3: Methods for assessing methodological limitations, data extraction and synthesis, and confidence in synthesized qualitative findings. *Journal of Clinical Epidemiology*, *97*, 49–58. https://doi.org/10.1016/j.jclinepi.2017.06.020

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan—A web and mobile app for systematic reviews. *Systematic Reviews*, *5*(1), 210. https://doi.org/10.1186/s13643-016-0384-4

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R.,

Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, n71. https://doi.org/10.1136/bmj.n71

Pearson, A., & Rose, K. (2021). A Conceptual Analysis of Autistic Masking: Understanding the Narrative of Stigma and the Illusion of Choice. *Autism in Adulthood: Challenges and Management*, *3*(1), 52–60. https://doi.org/10.1089/aut.2020.0043

Pearson, A., Rose, K., & Rees, J. (2023). 'I felt like I deserved it because I was autistic': Understanding the impact of interpersonal victimisation in the lives of autistic people. *Autism*, *27*(2), 500–511. https://doi.org/10.1177/13623613221104546

Phung, J., Penner, M., Pirlot, C., & Welch, C. (2021). What I Wish You Knew: Insights on Burnout, Inertia, Meltdown, and Shutdown From Autistic Youth. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.741421

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews: A product from the ESRC Methods Programme*. https://doi.org/10.13140/2.1.1018.4643

Pritchard-Rowe, E., de Lemos, C., Howard, K., & Gibson, J. (2024). Diversity in Autistic Play: Autistic Adults' Experiences. *Autism in Adulthood*, *6*(2), 218–228. https://doi.org/10.1089/aut.2023.0008

Radulski, E. M. (2022). Conceptualising autistic masking, camouflaging, and neurotypical privilege: Towards a minority group model of neurodiversity. *Human Development*, *66*(2), 113–127. https://doi.org/10.1159/000524122

Raymaker, D. M., Teo, A. R., Steckler, N. A., Lentz, B., Scharer, M., Delos Santos, A., Kapp, S. K., Hunter, M., Joyce, A., & Nicolaidis, C. (2020). "Having all of your internal resources exhausted beyond measure and being left with no

clean-up crew": Defining autistic burnout. *Autism in Adulthood*, *2*(2), 132–143. https://doi.org/10.1089/aut.2019.0079

Rødgaard, E.-M., Jensen, K., Miskowiak, K. W., & Mottron, L. (2022). Representativeness of autistic samples in studies recruiting through social media. *Autism Research*, *15*(8), 1447–1456. https://doi.org/10.1002/aur.2777

Rose, K. (2018, May 21). Autistic Burnout—How to Recognise and Understand it. *The Autistic Advocate: Autistic People Have a Voice*. https://theautisticadvocate.com/an-autistic-burnout/

Schneid, I., & Raz, A. E. (2020). The mask of autism: Social camouflaging and impression management as coping/normalization from the perspectives of autistic adults. *Social Science & Medicine*, *248*, 112826. https://doi.org/10.1016/j.socscimed.2020.112826

Schoondermark, F., Spek, A., & Kiep, M. (2024). Evaluating an Autistic Burnout Measurement in Women. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06438-8

Seers, K., & Hogg, R. (2023). "Fake it 'till you make it": Authenticity and wellbeing in late diagnosed autistic women. *Feminism & Psychology*, *33*(1), 23–41. https://doi.org/10.1177/09593535221101455

Stanich, A. (2024). All the World's a (Neurotypical) Stage: Neurodivergent Folklore, Autistic Masking, and Virtual Spaces for Discussing Autistic Identity. *Journal of American Folklore*, *137*(545), 293–308.

Sullivan, J. (2023). 'Pioneers of professional frontiers': The experiences of autistic students and professional work based learning. *Disability & Society*, *38*(7), 1209–1230. https://doi.org/10.1080/09687599.2021.1983414

Tierney, S., Burns, J., & Kilbey, E. (2016). Looking behind the mask: Social coping strategies of girls on the autistic spectrum. *Research in Autism Spectrum Disorders*, *23*, 73–83. https://doi.org/10.1016/j.rasd.2015.11.013

Tint, A., & Weiss, J. A. (2018). A qualitative study of the service experiences of women with autism spectrum disorder. *Autism*, *22*(8), 928–937. https://doi.org/10.1177/1362361317702561

Tomczak, M. T., & Kulikowski, K. (2024). Toward an understanding of occupational burnout among employees with autism – the Job Demands-Resources theory perspective. *Current Psychology*, *43*(2), 1582–1594. https://doi.org/10.1007/s12144-023-04428-0

Turnock, A., Langley, K., & Jones, C. R. G. (2022). Understanding Stigma in Autism: A Narrative Review and Theoretical Model. *Autism in Adulthood: Challenges and Management*, *4*(1), 76–91. https://doi.org/10.1089/aut.2021.0005

Welch, C., Cameron, D., Fitch, M., & Polatajko, H. (2021). Living in autistic bodies: Bloggers discuss movement control and arousal regulation. *Disability and Rehabilitation*, *43*(22), 3159–3167. https://doi.org/10.1080/09638288.2020.1729872

Wood, R., & Happé, F. (2021). What are the views and experiences of autistic teachers? Findings from an online survey in the UK. *Disability and Society*, *38*(1), Article 1.

Zener, D. (2019a). Helping autistic women thrive. *Advances in Autism*, *5*(3), 143–156. https://doi.org/10.1108/AIA-10-2018-0042

Zener, D. (2019b). Journey to diagnosis for women with autism. *Advances in Autism*, *5*(1), 2–13. https://doi.org/10.1108/AIA-10-2018-0041

Zhuang, S., Tan, D. W., Reddrop, S., Dean, L., Maybery, M., & Magiati, I. (2023). Psychosocial factors associated with camouflaging in autistic people and its relationship with mental health and well-being: A mixed methods systematic review. *Clinical Psychology Review*, *105*, 102335. https://doi.org/10.1016/j.cpr.2023.102335

Chapter Three

Bridging Chapter

Word Count: 384

The systematic review aimed to synthesise qualitative data to understand how camouflaging and autistic burnout are experienced by autistic people in relation to one another. The findings indicated that camouflaging is an energy-consuming and exhausting process which can contribute to the development of autistic burnout, though may be mitigated by taking time and space to recharge. Unmasking was illustrated as both a proactive method of managing energy levels and a forced reaction to experiencing burnout; however, the impact of unmasking was found to be complex and multifaceted. Consequences of camouflaging were experienced as stronger by autistic people, including the unique relationships with autistic burnout and implications for diagnosis.

In addition to autistic burnout, several other consequences of camouflaging have been described by autistic people. Camouflaging may have positive implications for autistic people, such as promoting relationships (Halsall et al., 2021), achieving professional goals (Hull et al., 2017), and avoiding negative social experiences (Bernardin, Mason, et al., 2021). However, the benefits of camouflaging may be outweighed by negative consequences (Mandy, 2019). Autistic people have described the negative impact of camouflaging on their sense of identity (Hull et al., 2017; Lilley et al., 2022) and feelings of inauthenticity (J. Cook et al., 2021). Camouflaging has been associated with poorer psychological wellbeing (Beck et al., 2020), including higher levels of depression, generalised anxiety, and social anxiety (Hull et al., 2021; Khudiakova et al., 2024). Hiding autistic traits through camouflaging has been cited as contributing to delayed identification (A. Cook et al., 2018; Livingston et al., 2019) and associated with a later age of diagnosis (McQuaid et al., 2022; Milner, Colvert, et al., 2023).

Whilst there has been an increase in research looking at camouflaging in autistic people in recent years, researchers are yet to reach a shared consensus on the conceptualisation of its impact (Cremone et al., 2023). Empirical research to

investigate the mechanisms underlying the impact of camouflaging and potential moderating factors is necessary to further our understanding of autistic people's experiences of camouflaging.

Therefore, the empirical paper aimed to explore the impact of camouflaging in autistic adults on three key identified areas; self-concept clarity, psychological wellbeing, and age of diagnosis. Psychological wellbeing was comprised of depression, anxiety, and social anxiety. Further, potential moderating effects of age of diagnosis and gender on the relationships were addressed.

Chapter Four

Empirical Paper

The impact of camouflaging on self-concept, depression, and social anxiety in autistic adults: Exploring moderating effects of gender diversity and age of diagnosis.

This empirical paper has been developed for submission to Research in Autism. Author guidelines are outlined in Appendix A. Journal word count limit: 6,000 words (not including the title page, abstract, figure legends, tables and reference list).

Word Count: 5998

The impact of camouflaging on self-concept, depression, and social anxiety in autistic adults: Exploring moderating effects of gender diversity and age of diagnosis.

Clarissa Osborne[a], Dr Rachel Russell[a], Dr Saskia Keville[b], and Dr Joe Barker[a]

[a]Norwich Medical School, University of East Anglia, Norwich Research Park, Norwich,

NR4 7TJ, UK

[b]School of Life and Medical Sciences, University of Hertfordshire, Hatfield, Hertfordshire, AL10 9AB, UK

Corresponding author: Clarissa.Osborne@uea.ac.uk

Declarations of interest: None.

The authors received no financial support for the research, authorship, or publication of this article.

Abstract

This study aimed to explore the impact of camouflaging in autistic people on self-concept, psychological wellbeing (comprised of depression, generalised anxiety, and social anxiety), and age of diagnosis, addressing potential moderators in these relationships. One hundred and eighty-five autistic adults were recruited via social media and completed a questionnaire comprising measures of camouflaging, self-concept clarity, depression, general anxiety, and social anxiety. Bootstrapped regression analyses found a significant effect of camouflaging on self-concept clarity, depression, and social anxiety symptoms. Camouflaging was not significantly related to general anxiety or diagnosis age. Further moderation analyses revealed a significant moderator effect of gender diversity on camouflaging's relationship with both self-concept clarity and depression. Age of diagnosis did not moderate any relationships. The findings indicate that camouflaging significantly predicts a proportion of variance in self-concept clarity, depression, and social anxiety in autistic adults, and that these effects may be stronger for gender diverse individuals compared to cisgender individuals. Mental health professionals working with autistic people should consider; the role of camouflaging in presenting difficulties, support focusing on developing self-concept, and the compounding intersectional impact of gender identity. Limitations of this study and areas for further research are discussed.

Keywords: autism, camouflaging, self-concept, depression, social anxiety, gender

Highlights

- Higher levels of camouflaging were predictive of lower self-concept clarity and higher depression and social anxiety.
- Camouflaging did not account for variance in general anxiety or age of autism diagnosis.
- Gender diversity influenced the relationship between camouflaging and both self-concept clarity and depression.
- Age of autism diagnosis did not influence any relationships with camouflaging.

Camouflaging refers to ways that autistic people hide or modify aspects of themselves to ‘fit in’ during social interactions (Hull et al., 2017). This can involve: masking by hiding and suppressing their autistic characteristics (J. Cook et al., 2022); compensation by using learned social strategies (Livingston et al., 2019); and assimilation by playing a role or copying others (Schneid & Raz, 2020). Autistic people have reported camouflaging to help with promoting social acceptance (Bernardin, Mason, et al., 2021), forming relationships (Cage & Troxell-Whitman, 2019), and achieving professional goals (Livingston et al., 2019). However, camouflaging has also been described as an obligation rather than a choice (Mandy, 2019); camouflaging may be a learned trauma response (Cleary et al., 2023), needed to avoid rejection (Seers & Hogg, 2023) and the threat of stigma that autistic people experience as a neurominority (Radulski, 2022).

Camouflaging may have a positive impact on promoting relational and professional outcomes. Autistic people report that camouflaging helps with building relationships (Hull et al., 2017), improving confidence (Livingston et al., 2019), feeling included (Bernardin, Mason, et al., 2021), avoiding being bullied (Halsall et al., 2021), and meeting their goals (Sullivan, 2023). However, despite camouflaging to aid with social interactions, this subsequently impacts on the ability to fully engage and communicate, which leads to limited feelings of closeness and connectedness, and difficulties building or maintaining meaningful social relationships (A. Cook et al., 2018; J. Cook et al., 2021). Therefore, the resultant relationships and opportunities are often described as superficial and unstable (Bernardin, Mason, et al., 2021; Halsall et al., 2021; Hull et al., 2017; Livingston et al., 2019).

Whilst camouflaging may have beneficial outcomes, these are often outweighed by the negative consequences (Mandy, 2019). Hull et al.’s (2017) thematic analysis revealed three themes representing the consequences of

camouflaging; “I fall to pieces”, “people have a stereotyped view”, and “I’m not my true self”. These themes referred to the wellbeing costs of camouflaging, the delay in diagnosis that may result from not appearing stereotypically autistic, and the contradictory role of camouflaging on their sense of identity, respectively. Further, Klein and Macoun (2025) applied the model of person-environment fit (Rauthmann, 2021) to conceptualise the consequences of inauthentic trait expression through camouflaging in autistic people. Proposed interpersonal outcomes included delayed diagnosis due to meeting societal expectations, reduced negative evaluation by others, and achievement of goals. Intrapersonal outcomes of camouflaging suggested a lack of insight into personal identity, negative self-esteem and self-perceptions, and mental health difficulties.

Camouflaging and Self-Concept Clarity

Self-concept clarity is the structural element of self-knowledge, encompassing the degree that self-beliefs are clearly defined, internally consistent, and stable (Campbell et al., 1996). Whilst self-concept clarity is distinct from self-esteem, the two constructs are highly related (Weber et al., 2023). The development of self-concept clarity may be negatively affected by uncertainty and lack of self-confirmation (Hertel, 2017), rejection sensitivity (Ayduk et al., 2009), dishonest self-disclosure (Orr & Moscovitch, 2015), and minority group status (Rios Morrison & Wheeler, 2010). Lower self-concept clarity has been found in autistic participants (Coutelle et al., 2020) and those with higher autistic traits (Berna et al., 2016; Rodgers et al., 2018).

There is a lack of research on the effect of camouflaging on self-concept clarity, but camouflaging is often described to have a negative impact on autistic people’s sense of identity and self-concept (D. Miller et al., 2021; Tierney et al., 2016). Portraying a neurotypical role or character can cause identity confusion and an uncertain boundary between the self and the ‘mask’ (Perich, 2024; Seers &

Hogg, 2023). Autistic people express feelings of inauthenticity due to camouflaging strategies and needing to keep their ‘true self’ hidden (Bernardin, Mason, et al., 2021; J. A. Evans et al., 2024; Lilley et al., 2022). The need to camouflage may perpetuate internalised shame (Cage & Troxell-Whitman, 2019; Schneid & Raz, 2020), reinforce a devalued sense of self (Halsall et al., 2021; Leedham et al., 2020), and lead to feelings of betrayal to the autistic community (Hull et al., 2017).

Camouflaging and Psychological Wellbeing

Camouflaging has been related to poorer psychological wellbeing and mental health (Ai et al., 2022; Beck et al., 2020; Ross et al., 2023). Remnélius et al. (2024) found a negative association between camouflaging and quality of life using a co-twin study design to control for environmental and genetic factors, inferring a causal influence of camouflaging on quality of life. Specifically, higher camouflaging has been associated with higher levels of depression, generalised anxiety, stress, and social anxiety (Bernardin, Lewis, et al., 2021; Bowri et al., 2021; J. A. Evans et al., 2024; Hull et al., 2021; Khudiakova et al., 2024). These associations remain cross-culturally (Keating et al., 2024). Cassidy et al. (2018) found that camouflaging significantly predicted suicidality in autistic adults, as measured by the Suicide Behaviours Questionnaire (SBQ-R; Osman et al., 2001), even after controlling for delay in diagnosis, anxiety, and depression. This association may be indirectly through thwarted belonging (S. A. Cassidy et al., 2020) and feelings of defeat and entrapment (S. Cassidy et al., 2023). Further, autistic people have described in qualitative research how camouflaging leads to depression, anxiety, social anxiety, self-harm, suicidal ideation, and hearing voices (Halsall et al., 2021; Hull et al., 2017; Livingston et al., 2019; Tierney et al., 2016).

However, the relationship between camouflaging and psychological wellbeing is variable and may be compounded by other factors. Some studies have found no difference in measures of depression or anxiety for different levels of

camouflaging (Cage & Troxell-Whitman, 2019; Corbett et al., 2021; Lai et al., 2017). Van der Putten et al. (2024) found that the association between camouflaging and mental health difficulties was only strong for a subgroup with low negative affect, suggesting that the negative impact of camouflaging is not generalisable to all autistic people. Camouflaging itself may not directly impact on mental health but may be related to the appraisal given by the individual (J. Evans, 2022) and its perceived success or efficacy (Field et al., 2024; Funawatari, Sumiya, Iwabuchi, & Senju, 2024).

Camouflaging and Delayed Diagnosis

The very nature of camouflaging may delay the recognition of autistic traits and diagnosis (Milner et al., 2022). Actively portraying a ‘non-autistic’ character to assimilate in social interactions may even contradict an autism diagnosis (McQuaid et al., 2022). Camouflaging may therefore have subsequent consequences due to the impact of a delayed autism diagnosis. Identification of autism is important in acceptance and self-compassion (Harmens et al., 2022; Leedham et al., 2020; Seers & Hogg, 2023), reducing victimisation (Bargiela et al., 2016), and forming a sense of identity (Botha et al., 2022; Stagg & Belcher, 2019). A delayed diagnosis is associated with lower quality of life (Atherton et al., 2022; Kamio et al., 2012; Oredipe et al., 2023) and psychological wellbeing (Lupindo et al., 2023).

The effect of camouflaging in delaying identification has been described in qualitative research by autistic adults (Baldwin & Costley, 2016; Bargiela et al., 2016; Hull et al., 2017; Livingston et al., 2019), adolescents (A. Cook et al., 2018; Halsall et al., 2021), and parents of autistic children (Anderson et al., 2020). A positive association between camouflaging and age of diagnosis has been found in quantitative studies (Perry et al., 2022), with a stronger relationship for women compared to men (Milner, Colvert, et al., 2023). McQuaid et al. (2022) found that individuals diagnosed as an adult presented with significantly higher ‘assimilation’

and ‘compensation’ compared to those diagnosed as a child. However, the association between camouflaging and diagnosis age has not been found in all research (Belcher et al., 2022; S. Cassidy et al., 2018; Gonçalves Garcia et al., 2025).

Gender Differences

Gender differences have been found in the use of camouflaging and its impact. Females report higher camouflaging than males through self-report (Bowri et al., 2021; Hull et al., 2020b; Perry et al., 2022) and other measures (Simcoe et al., 2023; Walsh et al., 2022; Wood-Downie et al., 2021). It is suggested that autistic women present with greater camouflaging intent than autistic men due to the pressures that girls and women experience to conform to gender stereotypes (Anderson et al., 2020; Jedrzejewska & Dewey, 2022; Krahn & Fenton, 2012). McQuaid et al. (2022) also found that gender diverse individuals reported significantly higher ‘compensation’ camouflaging behaviours than cisgender individuals. Further, consequences of camouflaging may differ based on gender (Cage & Troxell-Whitman, 2019; Hull et al., 2017), moderating the effect of camouflaging on mental health outcomes (Bernardin, Lewis, et al., 2021; J. A. Evans et al., 2024) and diagnosis age (Milner, Colvert, et al., 2023). Although not every study has found a difference between genders in camouflaging (Belcher et al., 2022; Cage et al., 2018) and its impact (Hull et al., 2021).

The Current Study

There has been a recent surge in research looking at camouflaging in autistic people, yet there remains a need to reach a shared consensus on our understanding and conceptualisation of the impact it has (Cremone et al., 2023). Previous research has highlighted that future research should develop testable hypotheses for the impact of camouflaging and investigate these mechanisms

empirically (Hull et al., 2017; McQuaid et al., 2022). Evidently, qualitative and quantitative research has demonstrated a range of consequences of camouflaging, but the mechanisms and moderators require further study. Therefore, this research aimed to explore three key facets of camouflaging and the moderators that impact on these relationships. Specifically, this study aimed to explore the impact of camouflaging in autistic adults on self-concept clarity, psychological wellbeing (comprised of depression, generalised anxiety, and social anxiety), and age of diagnosis, addressing potential moderators in these relationships. To achieve this, the study aimed to answer the following research questions (RQs):

RQ1: Does camouflaging predict self-concept clarity in autistic adults?

RQ2: Does camouflaging predict depression, generalised anxiety, and social anxiety in autistic adults?

RQ3: Does camouflaging predict age of diagnosis in autistic adults?

RQ4: How do related variables moderate these relationships?

Methods

Participants

Autistic adults were recruited to complete an online survey through opportunistic volunteer sampling on social media platforms (e.g. Facebook and Reddit) and by word of mouth. Recruitment adhered to presented considerations within the guidance by the National Institute for Health Research (NIHR; INVOLVE, 2014). Participants needed to be aged 18 years and over with an autism diagnosis and fluent in English language. Children and adolescents under the age of 18-years-old and those without an official diagnosis of autism were excluded from participating. Whilst inclusion of those self-identifying as autistic was considered, an official diagnosis was needed to measure the role of diagnostic timing in camouflaging. Non-human (bot) responses were excluded through use of a

CAPTCHA in the survey. An a priori calculation using G*Power (Faul et al., 2009) indicated that a minimum sample size of at least 98 participants was needed to detect a medium effect size (f^2 = .15) with 80% power for a hierarchical regression with six predictor variables (moderation analysis: two predictor variables, three controlled variables, and one interaction variable).

In total 185 autistic adults aged 18-71 years (*M* = 37.51, *SD* = 11.95) completed the survey and were included in the study. The final sample consisted of 80% female sex assigned at birth (*n* = 148) and 26.5% of all participants identified as gender diverse i.e. a different gender to their sex assigned at birth (*n* = 49). See Table 1 for demographic information. Participants received an autism diagnosis aged 2-65 years (*M* = 33.15, *SD* = 13.24). See Table 2 for autism diagnosis information. The majority of the sample (*n* = 149, 80.5%) preferred identity-first language (“autistic”).

Measures

Data for each variable was collected using an online questionnaire (Appendix H) via the PsyToolkit online platform (Stoet, 2010, 2017).

Camouflaging

The Camouflaging Autistic Traits Questionnaire (CAT-Q; Hull et al., 2019) was used to measure self-reported camouflaging behaviours. The CAT-Q consists of 25 items that are answered using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The total score ranges from 25 to 175, with a higher score indicating more camouflaging. The CAT-Q showed high internal consistency (Cronbach’s α = .91) in this study.

Table 1

Participant Demographic Information

	N	%
Sex assigned at birth		
Female	148	80.0
Male	28	15.1
Other	5	2.7
Prefer not to say	4	2.2
Gender diversity		
Cisgender	130	70.3
Gender diverse	49	26.5
Prefer not to say	6	3.2
Gender		
Woman	110	59.5
Man	27	14.6
Non-binary	24	13.0
Other[a]	11	5.9
Prefer not to say	13	7.0
Country of residence		
United Kingdom	73	39.5
United States of America	60	32.4
Canada	13	7.0
Australia	12	6.5
Other[b]	24	13.0
Prefer not to say	3	1.6
Ethnicity		
White	169	91.4
Mixed	5	2.7
Asian	3	1.6
Black	2	1.1
Other	5	2.7
Prefer not to say	1	0.5

	N	%
Religion		
Atheism	121	65.4
Christianity	23	12.4
Spiritualism	7	3.8
Pagenism	6	3.2
Judaism	5	2.7
Buddhism	3	1.6
Islam	2	1.1
Other/mixed	4	2.2
Prefer not to say	11	5.9
Education level attained		
Primary	2	1.1
Secondary	12	6.5
Further education	26	14.1
University undergraduate	69	37.3
University postgraduate	62	33.5
Doctoral	14	7.6
Employment status[c]		
Unemployed	36	19.5
Student	46	24.9
Employed	90	48.6
Self-employed	34	18.4
Retired	4	2.2
Prefer not to say	1	0.5

[a] Other genders (agender, autigender, figuring it out, genderfluid, neuroqueer, transmasculine, and two-spirit) were included in the non-binary group for analyses; [b] Other countries include Germany (*n* = 3), Norway (*n* = 3), Sweden (*n* = 3), Austria (*n* = 2), Netherlands (*n* = 2), Republic of Ireland (*n* = 2), South Africa (*n* = 2), Belgium (*n* = 1), China (*n* = 1), Denmark (*n* = 1), France (*n* = 1), New Zealand (*n* = 1), Spain (*n* = 1), and Ukraine (*n* = 1); [c] Total number is higher than sample size due to categories being non-mutually exclusive.

Table 2

Participant Diagnosis Information

	N	%
Autism diagnosis		
Diagnosis label		
Autism Spectrum Disorder	150	81.1
Aspergers Syndrome	18	9.7
Autism	9	4.9
Autism Spectrum Condition	3	1.6
High-functioning ASD	1	0.5
PDD-NOS	1	0.5
Mixed	2	1.1
Prefer not to say	1	0.5
Country of diagnosis[a]		
United Kingdom	74	40.0
United States of America	60	32.4
Canada	15	8.1
Australia	12	6.5
Other[b]	22	13.0
Diagnosistic service		
Autism diagnostic service for children/adolescents	14	7.6
Autism diagnostic service for adults	92	49.7
Mental health service for children/adolescents	9	4.9
Mental health service for adults	32	17.3
Third sector service	28	15.1
Other[c]	4	2.0
Unsure	6	3.2
Preferred terminology		
Autistic	149	80.5
People with autism	2	1.1
People on the spectrum	1	0.5
Other[d]	2	1.1
No preference	31	16.8

	N	%
Additional diagnoses / conditions[e]		
Neurodevelopmental conditions	121	65.4
ADHD	103	55.7
Specific learning difficulty	31	16.8
Dyspraxia	24	13.0
Speech or language disorder	10	5.4
Tourette's syndrome	6	3.2
Sensory processing disorder	4	2.2
Mental health condition	153	82.7
General anxiety disorder	109	58.9
Social anxiety disorder	52	28.1
Other anxiety condition[f]	48	25.9
Depressive disorder	87	47.0
Bipolar or other mood disorders	8	4.3
Obsessive compulsive disorders	24	13.0
Trauma related disorders	73	39.5
Eating disorders	36	19.5
Personality disorders	11	5.9
Substance use disorders	13	7.0

Note. ASD = autism spectrum disorder, PDD-NOS = pervasive developmental disorder – not otherwise specified, ADHD = attention-deficit hyperactivity disorder. [a] n = 183 due to missing data; [b] Other countries include Netherlands (*n* = 3), Norway (*n* = 3), Sweden (*n* = 3), Austria (*n* = 2), Belgium (*n* = 2), Germany (*n* = 2), China (*n* = 1), France (*n* = 1), New Zealand (*n* = 1), Republic of Ireland (*n* = 1), South Africa (*n* = 1), Spain (*n* = 1), and Ukraine (*n* = 1); [c] Other diagnosis services included ADHD diagnostic service, hospital, neurodevelopmental service, and school/education setting; [d] Other preferred terminology included neurodiverse and 'spergs'; [e] Total number is higher than sample size as non-mutually exclusive; [f] Other anxiety conditions included selective mutism (*n* = 19), specific phobia (*n* = 12), panic disorder (*n* = 12), and separation anxiety (*n* = 5).

Self-Concept

The self-report Self-Concept Clarity Scale (SCCS; Campbell et al., 1996) was used to measure self-concept clarity, which refers to participant understanding of their self-identity, and how clearly defined, internally consistent, and temporally stable this is. The SCCS is 12-items, answered on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), with higher scores indicating greater clarity of self-concept. The SCCS showed high internal consistency (α = .90) in this study.

Depression

The 9-item Patient Health Questionnaire (PHQ-9; Kroenke et al., 2016) was used to measure levels of depression symptoms and severity. The PHQ-9 uses a 4-point scale to measure self-reported symptom frequency over the last two weeks (0 = not at all, 3 = nearly every day). The total score ranges from 0-27 with depression severity cut-offs at 10, 15, and 20 for moderate, moderately severe, and severe depression, respectively. A good internal consistency was found in this study (α = .86).

General Anxiety

The 7-item General Anxiety Disorder questionnaire (GAD-7; Spitzer et al., 2006) was used to measure levels of generalised anxiety symptoms. The GAD-7 uses a 4-point scale to measure self-reported symptom frequency over the last two weeks (0 = not at all, 3 = nearly every day). The total score ranges from 0-21 with anxiety severity cut-offs at 10 and 15 for moderate and severe anxiety, respectively. A high internal consistency was found in this study (α = .90).

Social Anxiety

The self-report version of the Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) was used to measure anxiety across different social situations. The

LSAS is a 24-item measure, answered on a 4-point scale measuring both anxiety severity (0 = none, 3 = severe) and avoidance (0 = never, 3 = usually). The total score ranges from 0-144, with higher scores indicating higher levels of social anxiety. A high internal consistency was found in this study for the total LSAS (α = .95).

Diagnostic Timing

The timing of autism diagnosis was measured through self-reported age of diagnosis. Participant reports of an official diagnosis were not verified to avoid potential deterrent effects and risks around confidentiality that might arise through requesting documentation. Participants also completed the 10-item Autism Quotient (AQ-10; Allison et al., 2012) to complement the self-reported autism diagnosis. The AQ-10 is a shorter form of the full 50-item Autism Spectrum Quotient (AQ; Baron-Cohen et al., 2001) to measure autistic traits. Whilst the AQ-10 retains the sensitivity and predictive validity of the full AQ (Booth et al., 2013), the subsample of participants who scored below the cut-off (*n* = 20, 10.8%) were not excluded from analyses to account for the less than 100% sensitivity and natural variance in AQ scores in autistic samples. The AQ-10 scores are reported for representation and sample comparison purposes.

Procedure

Prospective participants opened an online link and were presented with an information sheet (Appendix I) followed by a consent form (Appendix J). A total of 1043 prospective participants visited the information sheet page but only 245 proceeded through to the survey. A further six participants were excluded at the screening question due to not having an official diagnosis of autism. There were 54 incomplete responses that were also excluded due to the participants' right to withdraw at any stage. A progress bar was displayed throughout the survey and

there was a median completion time of 16.5 minutes. Participants created a unique identifier to enable withdrawal post-completion and then answered questions about demographic information and completed the measures. They were offered an opportunity to provide feedback about the study and request a copy of the study findings at the end. Lastly, participants were presented with a debrief sheet (Appendix K).

Ethical Considerations

The study was approved by the University of East Anglia's (UEA) Faculty of Medicine and Health Sciences Research Ethics Sub-committee (ID: ETH2324-0006; see Appendix L).

Data Analysis

IBM SPSS Statistics (Version 29; IBM Corp, 2023) was used for descriptive statistics and data analysis. The moderation analyses used the PROCESS macro for SPSS (A. F. Hayes, 2017).

Regression Analyses (RQ 1-3)

The data for the CAT-Q, SCCS, PHQ-9 and GAD-7 was non-normally distributed and there were also three influential cases across the dataset with no valid reason for exclusion. To account for the deviation from assumption of normality whilst maintaining the robustness of the statistical analysis, subsequent regression analyses used bootstrapping with 2000 resamples at 95% upper and lower confidence intervals. Bootstrapped hierarchical regression analyses were conducted to measure the predictive value of camouflaging on self-concept (RQ1), depression, anxiety, and social anxiety (RQ2), and diagnosis age (RQ3), whilst controlling for age, gender diversity, and country.

Moderation Analyses (RQ 4)

Bootstrapped moderation analyses were carried out using Model 1 of the PROCESS macro for SPSS (A. F. Hayes, 2017) to estimate the moderating effects of diagnosis age and gender diversity on the relationships between camouflaging and self-concept, depression, and social anxiety (see Figure 1). Moderation analyses used bootstrapping with 5000 re-samples at 95% upper and lower confidence intervals, controlling for age, gender, and country.

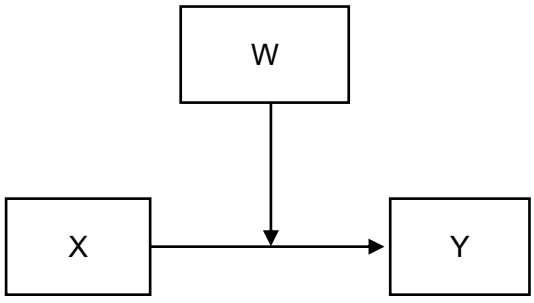
Results

Descriptive Statistics and Normality Testing

The means, standard deviations, and ranges of the measure scores were calculated to summarise the data (see Table 3). Normality was assessed using the Shapiro-Wilk test and examining histograms and Q-Q plots (see Appendix M). Scores on the CAT-Q, SCCS, PHQ-9 and GAD-7 were not normally distributed (p <.001); the CAT-Q was negatively skewed, the SCCS and PHQ-9 were positively skewed, and the GAD-7 demonstrated a platykurtic distribution.

Figure 1

Proposed Moderation using Model 1 of Hayes (2017) PROCESS Macro



Note. X = CAT-Q scores; Y = SCCS, PHQ-9, or LSAS scores; W = gender diversity or age of diagnosis

Table 3

Descriptive Statistics of Variables (n = 185)

	M	SD	Range
AQ-10	7.91	1.74	3-10
CAT-Q	132.85	21.50	55-172
SCCS	30.34	9.88	12-59
PHQ-9	11.97	6.39	0-27
GAD-7	9.83	5.86	0-21
LSAS	89.05	25.24	8-144
Diagnosis age[a]	33.15	13.24	2-65

Note. AQ-10 = Autism Quotient, CAT-Q = Camouflaging Autistic Traits Questionnaire, SCCS = Self-concept Clarity Scale, PHQ-9 = Patient Health Questionnaire, GAD-7 = General Anxiety Disorder scale, LSAS = Liebowitz Social Anxiety Scale

[a] n = 184

RQ1: Does Camouflaging Predict Self-Concept Clarity?

A bootstrapped hierarchical regression analysis (2000 samples) revealed a significant effect of CAT-Q scores on SCCS scores, β = -.139, p <.001, 95% CI [-.217, -.057], after controlling for demographics (see Appendix M). The addition of CAT-Q scores significantly improved the model (ΔR^2 = .091), with the final model explaining approximately 10.8% of the variance in SCCS scores (R^2 = .108). This suggests that camouflaging has some predictive value over self-concept clarity.

RQ2: Does Camouflaging Predict Depression, Anxiety, and Social Anxiety?

A bootstrapped hierarchical regression analysis (2000 samples) revealed a significant small effect of CAT-Q scores on PHQ-9 scores, β = .065, p = .016, 95% CI [.013, .124], after controlling for demographics (see Appendix N). The addition of CAT-Q scores significantly improved the model (ΔR^2 = .047), with the final model explaining approximately 7.0% of the variance in PHQ-9 scores (R^2 = .070). A bootstrapped hierarchical regression analysis (2000 samples) revealed no significant effect of CAT-Q scores on GAD-7 scores, β = .043, p = .073, 95% CI [-

.005, .087]. A bootstrapped hierarchical regression analysis (2000 samples) revealed a significant effect of CAT-Q scores on LSAS scores, β = .447, p <.001, 95% CI [.249, .635], after controlling for demographics (see Appendix N). The addition of CAT-Q scores significantly improved the model (ΔR^2 = .142), with the final model explaining approximately 18.7% of the variance in LSAS scores (R^2 = .187). This suggests that camouflaging has some predictive value over depression and social anxiety but not general anxiety.

RQ3: Does Camouflaging Predict Age of Autism Diagnosis?

A bootstrapped hierarchical regression analysis (2000 samples) revealed no significant effect of CAT-Q scores on diagnosis age, β = .020, p = .345, 95% CI [-.018, .063], after controlling for demographics (see Appendix N). This suggests that camouflaging has no predictive value over age of autism diagnosis.

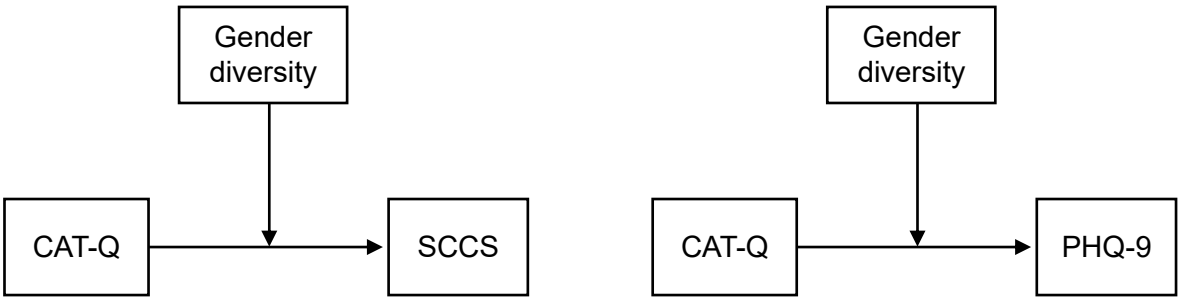
RQ4: How do Related Variables Moderate these Relationships?

Bootstrapped moderation analyses (5000 samples) estimated the moderating effects of diagnosis age and gender diversity on the identified relationships between the CAT-Q and the SCCS, PHQ-9, and LSAS (see Appendix O). There were no significant moderating effects of diagnosis age. Significant moderator effects were found for gender diversity on the relationship between the CAT-Q and both the SCCS and PHQ-9 (see Figure 2).

For the bootstrapped moderation analysis on the relationship between CAT-Q scores and SCCS scores as moderated by gender diversity and controlling for demographics, the overall model was significant, R^2 = .155, F(6,162) = 4.934, p <.001, explaining 15.5% of the variance in SCCS scores. The interaction between CAT-Q scores and gender diversity was significant (β = -.205, 95% CI [-.333, -.021]), suggesting that the effect of camouflaging on self-concept clarity does change depending on gender diversity. Specifically, the effect of CAT-Q scores on

Figure 2

Significant Moderator Effects using Model 1 of Hayes (2017) PROCESS Macro

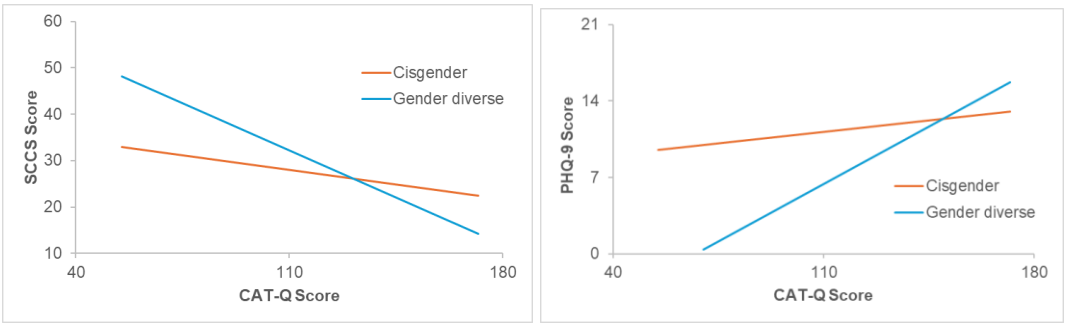


SCCS scores was stronger for gender diverse individuals compared to cisgender individuals (see Figure 3).

For the bootstrapped moderation analysis on the relationship between CAT-Q scores and PHQ-9 scores as moderated by gender diversity and controlling for demographics, the overall model was significant, R^2 = .120, F(6, 162) = 3.679, p = .002, explaining 12.0% of the variance in PHQ-9 scores. The interaction between CAT-Q scores and gender diversity was significant (β = .126, 95% CI [.026, .219]), suggesting that the effect of camouflaging on depression symptoms varies depending on gender diversity. Specifically, there was only a significant effect of CAT-Q scores on PHQ-9 scores for gender diverse individuals compared to cisgender individuals (see Figure 3).

Figure 3

Simple Slopes Analysis of Significant Moderator Effects



Note. The graphs represent estimated values based on the moderation analysis using Model 1 from Hayes (2017) PROCESS Macro i.e. predicted SCCS or PHQ-9 scores across CAT-Q scores for both cisgender and gender diverse participants.

Discussion

Camouflaging has been suggested to have consequences for autistic people (Hull et al., 2017); however, there remains a need to empirically conceptualise the mechanisms that explain these experiences (Cremone et al., 2023). Therefore, this study aimed to explore the impact of camouflaging in autistic people on self-concept, psychological wellbeing (comprised of depression, generalised anxiety, and social anxiety), and diagnosis age, addressing potential moderators in these relationships. Bootstrapped regression analyses found a significant effect of camouflaging on self-concept clarity, depression, and social anxiety symptoms. Further moderation analyses revealed a significant moderator effect of gender diversity on camouflaging's relationship with both self-concept clarity and depression.

This, to our knowledge, is the first study to quantitatively measure the relationship between camouflaging and self-concept clarity in English speaking autistic adults. A negative effect of camouflaging on self-concept clarity was found,

with higher camouflaging predictive of lower self-concept clarity. Kong et al. (2024) also found a significant negative effect of camouflaging on self-concept clarity in Chinese autistic adults. The effect of camouflaging on self-concept clarity is in line with previous qualitative findings (Hull et al., 2017; Lilley et al., 2022; Schneid & Raz, 2020; Seers & Hogg, 2023; Tierney et al., 2016). This relationship was significantly moderated by gender diversity, whereby increases in camouflaging were predictive of a greater reduction in self-concept clarity for gender diverse individuals compared to cisgender individuals. This is supported by findings that gender diverse individuals also engage in similar camouflaging behaviours by presenting in less gender affirming ways, and this is associated with lower self-concept clarity in gender diverse populations (Doyle et al., 2021; Gao et al., 2023), as well as qualitative reports by gender diverse individuals that being able to be themselves and gender affirming has a positive impact on their self-concept (Kuper et al., 2018).

This may highlight the vulnerability perpetuated by the intersectionality of being a neurominority and gender diverse as marginalised groups. The minority stress model posits the inter-connectedness of identities and the compounding impact of minority stress (Meyer, 2003), by which camouflaging and masking are mechanisms to avoid stigma and discrimination for both autistic and gender diverse individuals (R. A. Miller et al., 2020a; Turnock et al., 2022). Gender diverse autistic people have described needing to pass as both neurotypical and cisgender (Maroney & Horne, 2022; R. A. Miller et al., 2020b), and the impact of the interplay between the identities on their sense of self (Glackin et al., 2024; Hillier et al., 2019). For gender diverse people, the inauthentic portrayal through camouflaging may be more significant than for cisgender people due to the compounding impact of multiple marginalised identities, impacting on self-concept clarity. Further, gender diverse autistic people experience intersectional stigma across both autistic and

gender diverse communities (Maroney & Horne, 2022; R. A. Miller et al., 2020b), negatively impacting on their sense of belonging (Hillier et al., 2019; Peachey & Crane, 2024).

The positive relationship between camouflaging and depression is congruent with previous research (Bernardin, Lewis, et al., 2021; Bowri et al., 2021). Gender diversity was also found to moderate this relationship, indicating only a significant effect of camouflaging on depression for gender diverse individuals and not for cisgender individuals. This contrasts with Hull et al.'s (2021) finding of no moderating effect of gender diversity on the relationship between camouflaging and depression; however, their gender diverse sample was small and underpowered, so only large effect sizes would be detected.

The additional minority stress experienced by autistic gender diverse individuals may exacerbate the mechanisms of camouflaging leading to depression, compared with cisgender autistic people. Higher levels of mental health difficulties and poorer wellbeing have been found in gender diverse autistic people compared to cisgender autistic people and gender diverse non-autistic people (Botha & Frost, 2020; George & Stokes, 2018a; Green et al., 2025; Hall et al., 2020; Soto et al., 2024), indicating an additive effect of minority identity on wellbeing. Further findings indicate an effect of camouflaging and gender minority stress on mental health outcomes in autistic gender diverse individuals (White et al., 2024). The concealment of gender identity and 'passing' has been related to expectations of rejection and depression in gender diverse populations (Rood et al., 2016), whereas feeling able to authentically express their gender is related to lower depression (To et al., 2020).

This study found no significant relationship between camouflaging and general anxiety, conflicting with some previous findings (Bowri et al., 2021; Hull et al., 2021; Keating et al., 2024). Interestingly, the other studies that have reported no

relationship between camouflaging and general anxiety did not use the CAT-Q to measure camouflaging (Corbett et al., 2021; Lai et al., 2017). This finding may indicate that the mechanisms by which camouflaging impacts on anxiety are domain specific. Camouflaging was found to account for a significant proportion of variance in social anxiety, revealing a positive relationship in line with previous findings (Bowri et al., 2021; Hull et al., 2021). This may reflect potential overlapping constructs of camouflaging and safety behaviours in social anxiety (Lei, Leigh, et al., 2024; Pyszkowska, 2024), though the CAT-Q has been found to measure a construct differentiated from social anxiety (McKinnon et al., 2024).

There was no association between camouflaging and diagnosis age which contrasts with previous empirical findings (McQuaid et al., 2022) and qualitative reports (Halsall et al., 2021; Hull et al., 2017; Livingston et al., 2019). Milner et al. (2023) also found no predictive effect of camouflaging on age of diagnosis; though similarly to this study, many participants were diagnosed as an adult resulting in limited variance. Further, diagnosis age did not moderate any relationships, which challenges the idea that the effect of camouflaging is impacted by diagnostic timing. This contrasts with qualitative findings of the positive impact of diagnosis on self-concept (Botha et al., 2022; Cox et al., 2017; Leedham et al., 2020; Stagg & Belcher, 2019) and quantitative reports of increased mental health symptoms for those later diagnosed (Hosozawa et al., 2021; Jadav & Bal, 2022). Any relationship between camouflaging and diagnostic timing is likely complex, bidirectional, and confounded by other factors (Perich, 2024; Perry et al., 2022). It may be that the impact of diagnosis timing is related to recency of the diagnosis and processing time (Corden et al., 2021) as opposed to simply the age of diagnosis. The role of camouflaging on delayed diagnosis may relate more to camouflaging ‘effectiveness’ on first impressions rather than camouflaging intent or effort (Belcher et al., 2022). Specifically for women, though presenting with higher camouflaging and later

diagnosis, the primary obstacle to delayed diagnosis may relate to gender stereotypes rather than the camouflaging itself (Gonçalves Garcia et al., 2025).

Limitations

The majority of participants were assigned female at birth which conflicts with the 3:1 male to female ratio reported in the general autistic population (Loomes et al., 2017). The recruitment of autistic adults through social media increases susceptibility to sampling bias, with online samples often reporting higher female respondence (Rødgaard et al., 2022). The discrepancy between expected sex differences within this sample may also relate to some recruitment from forums specific to autistic girls and women. Over a quarter of participants identified as gender diverse, which may be representative of a high co-occurrence of autistic and gender diverse identities in comparison to the non-autistic population (George & Stokes, 2018b; Warrier et al., 2020), but it is a higher proportion than found in previous camouflaging studies (McQuaid et al., 2022). Most participants were white ethnicity from an Anglo culture and had attained university-level education, with the cognitive ability to take part through self-report. This is a common sampling bias in camouflaging research (Libsack et al., 2021; Zhuang et al., 2023), as most studies are based within Western, Educated, Industrialized, Rich and Democratic (WEIRD) societies (Henrich et al., 2010). Therefore, the findings cannot be generalised to the autistic population as the sample is subject to bias and is not representative of autistic males, people from ethnically diverse backgrounds, and people with a learning disability.

Participants needed to have an official diagnosis to allow exploration of the impact of timing of diagnosis; however, this excluded self-identified autistic people from participating. Self-identification is a necessary precursor to a formal diagnosis in adulthood (Wylie, 2014) and seeking a diagnosis is a lengthy process that can present with several barriers (Lewis, 2017). Therefore, the findings are not reflective

of autistic people across different stages of the identification process. Also, any effect of camouflaging on delaying diagnosis may be more apparent across different ages prior to identification and subsequently may not be evident in a sample of only diagnosed autistic adults. Autism diagnoses were self-reported and not verified which limits the certainty in the diagnosis ages and descriptive information reported. Most of the sample scored higher than the cut-off on the AQ-10 which improves confidence in the validity of the autistic status of the sample, and though twenty participants scored below the cut-off, this is a smaller portion than the lack of sensitivity of the measure (Booth et al., 2013). Only a small portion of the sample received a diagnosis during childhood and most participants had recently been diagnosed, reducing the variance in diagnosis age and time since diagnosis. Again, this is a common sampling bias in studies recruiting autistic adults online, with the mean age of diagnosis tending to be high and in adulthood (Rødgaard et al., 2022).

The cross-sectional design means that causation and directionality of the relationships between variables cannot be determined; for example, additional factors related to camouflaging may account for more variance in mental health outcomes than the camouflaging itself, such as past interpersonal trauma (J. A. Evans et al., 2024) and minority stress (White et al., 2024). The CAT-Q only measures current camouflaging so the longitudinal impact of camouflaging was not captured, a crucial consideration given potential decreases in camouflaging after diagnosis (Bradley et al., 2021) and differences in the experiences of camouflaging between childhood and adulthood (Klein et al., 2024). The nature of the measures also does not capture nuanced differences across contexts; for example, autistic people may present with varying levels of camouflaging depending on the neurotype of others in the situation (Crompton, Hallett, et al., 2020; Funawatari, Sumiya, Iwabuchi, & Senju, 2024; Marocchini & Baldin, 2024).

The impact of camouflaging on sense of identity was measured through self-concept clarity to capture the sense of not knowing who you are, but low self-esteem and superficial relationships have also been referred to within other qualitative findings of its impact on self-identity (Bernardin, Mason, et al., 2021; J. Cook et al., 2021; Leedham et al., 2020). Domains of depression, general anxiety, and social anxiety were used to measure psychological wellbeing, but concepts such as exhaustion and autistic burnout could not be measured as part of this, despite it being strongly indicated. Researchers have only recently started to define autistic burnout (Higgins et al., 2021; Raymaker et al., 2020) and there are currently no standardised measures for the construct (S. R. Arnold et al., 2023b; Mantzalas et al., 2024), so it could not be measured empirically in this study. Whilst the measures implemented in this study have been used with autistic samples previously, only the CAT-Q was designed specifically for use with autistic people and therefore, their construct validity and interpretations may not reflect the participants' true experience. Particular items on the measures may have been misleading or difficult for autistic participants, such as "trying to pick up someone" from the LSAS (Liebowitz, 1987).

Implications

Camouflaging was found to be associated negatively with outcome variables, highlighting potential costs of camouflaging for autistic people. Whilst this suggests that reducing camouflaging may be helpful in promoting more positive outcomes, it may not necessarily be safe for autistic people to unmask and be their authentic selves due to stigma and discrimination (Cleary et al., 2023; Radulski, 2022). Therefore, promoting societal change in addressing stigma and working towards full acceptance and inclusion should be a priority to help alleviate the burden on autistic people to continue camouflaging (Turnock et al., 2022).

The findings of this study reiterate the association between camouflaging and mental health difficulties, specifically depression and social anxiety. Mental health professionals should consider the role of camouflaging when working with autistic people. This could include implementing screening measures of camouflaging, such as the CAT-Q or the recently validated short-form version designed for clinical purposes (CATQ-SF; Hull et al., 2024). An understanding of camouflaging should be individually formulated, taking into consideration the individual's own unique experiences of camouflaging. Support offered could then be formulation-driven, accounting for camouflaging demands and safety to unmask in their current social context. Additionally, the identified relationship between camouflaging and poorer self-concept clarity illustrates a potential area of focus for supporting autistic people. Helpful approaches may support autistic people to understand their experience of camouflaging, move towards self-acceptance and authenticity, and build on their sense of identity (J. Cook et al., 2021; Lei & Nocon, 2024; van der Putten, 2024).

The moderating effect of gender diversity suggests that clinicians working with autistic adults should consider the role of gender identity and how both autistic and gender identities are experienced in the context of camouflaging. The autistic population have a higher rate of gender diversity compared to the non-autistic population (George & Stokes, 2018b; Warrier et al., 2020), emphasising the importance of this consideration. The stigma related to gender diversity also needs to be addressed to mitigate any minority stress; promoting safe spaces for gender diverse autistic people within each of the respective autistic and gender diverse communities could be a valuable first step.

Further research should explore the role of intersecting identities on the impact of camouflaging, such as gender diversity as demonstrated in this study. The high number of participants within the sample with ADHD and trauma-related

diagnoses suggests value in advancing research on the role of camouflaging for autistic people with additional neurodevelopmental and mental health conditions and past traumatic experiences. The nature of the relationship between camouflaging and diagnostic timing needs to be further studied as an increased understanding of this dynamic will be crucial to supporting autistic adults pre- and post-diagnosis. Longitudinal research designs are needed to determine directionality and causality in the factors shown to be related to camouflaging. Any further research should also aim to be inclusive of under-represented autistic people in camouflaging research i.e. autistic people with varying cognitive abilities and support needs, and from a range of ethnically diverse and socioeconomic backgrounds.

Conclusion

Conceptualizing the mechanisms that explain the impact of camouflaging is crucial in understanding how to support autistic adults and prevent negative outcomes identified in previous research. In this study, camouflaging was found to have a significant effect on self-concept clarity, depression, and social anxiety symptoms. Gender diversity had a significant moderator effect on camouflaging's relationship with both self-concept clarity and depression. These findings have implications for mental health professionals working with autistic adults, highlighting the role of camouflaging in mental health difficulties and the potential value of self-concept clarity support. Further consideration is needed for the experiences of gender diverse autistic individuals and the role of intersecting minority identities on the impact of camouflaging.

References

Ai, W., Cunningham, W. A., & Lai, M.-C. (2022). Reconsidering autistic 'camouflaging' as transactional impression management. *Trends in Cognitive Sciences*, *26*(8), 631–645. https://doi.org/10.1016/j.tics.2022.05.002

Allison, C., Auyeung, B., & Baron-Cohen, S. (2012). Toward brief "red flags" for autism screening: The short autism spectrum quotient and the short quantitative checklist in 1,000 cases and 3,000 controls. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(2), 202-212.e7. https://doi.org/10.1016/j.jaac.2011.11.003

Anderson, J., Marley, C., Gillespie-Smith, K., Carter, L., & MacMahon, K. (2020). When the mask comes off: Mothers' experiences of parenting a daughter with autism spectrum condition. *Autism*, *24*(6), 1546–1556. https://doi.org/10.1177/1362361320913668

Arnold, S. R., Higgins, J. M., Weise, J., Desai, A., Pellicano, E., & Trollor, J. N. (2023). Towards the measurement of autistic burnout. *Autism*, *27*(7), 1933–1948. https://doi.org/10.1177/13623613221147401

Atherton, G., Edisbury, E., Piovesan, A., & Cross, L. (2022). Autism through the ages: A mixed methods approach to understanding how age and age of diagnosis affect quality of life. *Journal of Autism and Developmental Disorders*, *52*(8), 3639–3654. https://doi.org/10.1007/s10803-021-05235-x

Ayduk, Ö., Gyurak, A., & Luerssen, A. (2009). Rejection Sensitivity Moderates the Impact of Rejection on Self-Concept Clarity. *Personality and Social Psychology Bulletin*, *35*(11), 1467–1478. https://doi.org/10.1177/0146167209343969

Baldwin, S., & Costley, D. (2016). The experiences and needs of female adults with high-functioning autism spectrum disorder. *Autism*, *20*(4), 483–495. https://doi.org/10.1177/1362361315590805

Bargiela, S., Steward, R., & Mandy, W. (2016). The experiences of late-diagnosed women with autism spectrum conditions: An investigation of the female autism phenotype. *Journal of Autism and Developmental Disorders*, *46*(10), 3281–3294. https://doi.org/10.1007/s10803-016-2872-8

Baron-Cohen, S., Wheelwright, S., Skinner, R., Martin, J., & Clubley, E. (2001). The Autism-Spectrum Quotient (AQ): Evidence from Asperger Syndrome/High-Functioning Autism, Males and Females, Scientists and Mathematicians. *Journal of Autism and Developmental Disorders*, *31*(1), 5–17. https://doi.org/10.1023/A:1005653411471

Beck, J. S., Lundwall, R. A., Gabrielsen, T., Cox, J. C., & South, M. (2020). Looking good but feeling bad: "Camouflaging" behaviors and mental health in women with autistic traits. *Autism*, *24*(4), 809–821. https://doi.org/10.1177/1362361320912147

Belcher, H. L., Morein-Zamir, S., Mandy, W., & Ford, R. M. (2022). Camouflaging Intent, First Impressions, and Age of ASC Diagnosis in Autistic Men and Women. *Journal of Autism and Developmental Disorders*, *52*(8), 3413–3426. https://doi.org/10.1007/s10803-021-05221-3

Berna, F., Göritz, A. S., Schröder, J., Coutelle, R., Danion, J.-M., Cuervo-Lombard, C. V., & Moritz, S. (2016). Self-disorders in individuals with autistic traits: Contribution of reduced autobiographical reasoning capacities. *Journal of Autism and Developmental Disorders*, *46*(8), 2587–2598. https://doi.org/10.1007/s10803-016-2797-2

Bernardin, C. J., Lewis, T., Bell, D., & Kanne, S. (2021). Associations between social camouflaging and internalizing symptoms in autistic and non-autistic adolescents. *Autism: The International Journal of Research and Practice*, *25*(6), 1580–1591. https://doi.org/10.1177/1362361321997284

Bernardin, C. J., Mason, E., Lewis, T., & Kanne, S. (2021). "You Must Become a Chameleon to Survive": Adolescent Experiences of Camouflaging. *Journal of*

Autism and Developmental Disorders, *51*(12), 4422–4435. https://doi.org/10.1007/s10803-021-04912-1

Booth, T., Murray, A. L., McKenzie, K., Kuenssberg, R., O'Donnell, M., & Burnett, H. (2013). Brief Report: An Evaluation of the AQ-10 as a Brief Screening Instrument for ASD in Adults. *Journal of Autism and Developmental Disorders*, *43*(12), 2997–3000. https://doi.org/10.1007/s10803-013-1844-5

Botha, M., Dibb, B., & Frost, D. M. (2022). 'Autism is me': An investigation of how autistic individuals make sense of autism and stigma. *Disability & Society*, *37*(3), 427–453. https://doi.org/10.1080/09687599.2020.1822782

Botha, M., & Frost, D. M. (2020). Extending the Minority Stress Model to Understand Mental Health Problems Experienced by the Autistic Population. *Society and Mental Health*, *10*(1), 20–34. https://doi.org/10.1177/2156869318804297

Bowri, M., Hull, L., Allison, C., Smith, P., Baron-Cohen, S., Lai, M.-C., & Mandy, W. (2021). Demographic and psychological predictors of alcohol use and misuse in autistic adults. *Autism*, *25*(5), 1469–1480. https://doi.org/10.1177/1362361321992668

Bradley, L., Shaw, R., Baron-Cohen, S., & Cassidy, S. (2021). Autistic adults' experiences of camouflaging and its perceived impact on mental health. *Autism in Adulthood*, *3*(4), 320–329. https://doi.org/10.1089/aut.2020.0071

Cage, E., Di Monaco, J., & Newell, V. (2018). Experiences of Autism Acceptance and Mental Health in Autistic Adults. *Journal of Autism and Developmental Disorders*, *48*(2), 473–484. https://doi.org/10.1007/s10803-017-3342-7

Cage, E., & Troxell-Whitman, Z. (2019). Understanding the reasons, contexts and costs of camouflaging for autistic adults. *Journal of Autism and Developmental Disorders*, *49*(5), 1899–1911. https://doi.org/10.1007/s10803-018-03878-x

Campbell, J., Trapnell, P., Heine, S., Katz, I., Lavallee, L., & Lehman, D. (1996). 'Self-concept clarity: Measurement, personality correlates, and cultural boundaries': Correction. *Journal of Personality and Social Psychology*, *70*, item 10 in Table 1 contains a typographical error. https://doi.org/10.1037/0022-3514.70.6.1114

Cassidy, S. A., Gould, K., Townsend, E., Pelton, M., Robertson, A. E., & Rodgers, J. (2020). Is camouflaging autistic traits associated with suicidal thoughts and behaviours? Expanding the interpersonal psychological theory of suicide in an undergraduate student sample. *Journal of Autism and Developmental Disorders*, *50*(10), 3638–3648. https://doi.org/10.1007/s10803-019-04323-3

Cassidy, S., Bradley, L., Shaw, R., & Baron-Cohen, S. (2018). Risk markers for suicidality in autistic adults. *Molecular Autism*, *9*(1), 42. https://doi.org/10.1186/s13229-018-0226-4

Cassidy, S., McLaughlin, E., McGranaghan, R., Pelton, M., O'Connor, R., & Rodgers, J. (2023). Is camouflaging autistic traits associated with defeat, entrapment, and lifetime suicidal thoughts? Expanding the Integrated Motivational Volitional Model of Suicide. *Suicide and Life-Threatening Behavior*, *53*(4), 572–585. https://doi.org/10.1111/sltb.12965

Cleary, M., West, S., Kornhaber, R., & Hungerford, C. (2023). Autism, Discrimination and Masking: Disrupting a Recipe for Trauma. *Issues in Mental Health Nursing*, *44*(9), 799–808. https://doi.org/10.1080/01612840.2023.2239916

Cook, A., Ogden, J., & Winstone, N. (2018). Friendship motivations, challenges and the role of masking for girls with autism in contrasting school settings. *European Journal of Special Needs Education*, *33*(3), 302–315. https://doi.org/10.1080/08856257.2017.1312797

Cook, J., Crane, L., Bourne, L., Hull, L., & Mandy, W. (2021). Camouflaging in an everyday social context: An interpersonal recall study. *Autism*, *25*(5), 1444–1456. https://doi.org/10.1177/1362361321992641

Cook, J., Crane, L., Hull, L., Bourne, L., & Mandy, W. (2022). Self-reported camouflaging behaviours used by autistic adults during everyday social interactions. *Autism*, *26*(2), 406–421. https://doi.org/10.1177/13623613211026754

Corbett, B. A., Schwartzman, J. M., Libsack, E. J., Muscatello, R. A., Lerner, M. D., Simmons, G. L., & White, S. W. (2021). Camouflaging in Autism: Examining Sex-Based and Compensatory Models in Social Cognition and Communication. *Autism Research*, *14*(1), 127–142. https://doi.org/10.1002/aur.2440

Corden, K., Brewer, R., & Cage, E. (2021). Personal Identity After an Autism Diagnosis: Relationships With Self-Esteem, Mental Wellbeing, and Diagnostic Timing. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.699335

Coutelle, R., Goltzene, M.-A., Bizet, E., Schoenberger, M., Berna, F., & Danion, J.-M. (2020). Self-concept clarity and autobiographical memory functions in adults with autism spectrum disorder without intellectual deficiency. *Journal of Autism and Developmental Disorders*, *50*(11), 3874–3882. https://doi.org/10.1007/s10803-020-04447-x

Cox, B. E., Thompson, K., Anderson, A., Mintz, A., Locks, T., Morgan, L., Edelstein, J., & Wolz, A. (2017). College Experiences for Students With Autism Spectrum Disorder: Personal Identity, Public Disclosure, and Institutional Support. *Journal of College Student Development*, *58*(1), 71–87.

Cremone, I. M., Carpita, B., Nardi, B., Casagrande, D., Stagnari, R., Amatori, G., & Dell'Osso, L. (2023). Measuring social camouflaging in individuals with high functioning autism: A literature review. *Brain Sciences*, *13*(3), Article 3. https://doi.org/10.3390/brainsci13030469

Crompton, C. J., Hallett, S., Ropar, D., Flynn, E., & Fletcher-Watson, S. (2020). 'I never realised everybody felt as happy as I do when I am around autistic

people': A thematic analysis of autistic adults' relationships with autistic and neurotypical friends and family. *Autism*, *24*(6), 1438–1448. https://doi.org/10.1177/1362361320908976

Doyle, D. M., Begeny, C. T., Barreto, M., & Morton, T. A. (2021). Identity-Related Factors Protect Well-Being Against Stigma for Transgender and Gender Non-Conforming People. *Archives of Sexual Behavior*, *50*(7), 3191–3200. https://doi.org/10.1007/s10508-021-02029-1

Evans, J. (2022). Autism Camouflaging in Relation to Views about Autism, Mental Health, and Gender Identity. *Global Tides*, *16*(1). https://digitalcommons.pepperdine.edu/globaltides/vol16/iss1/10

Evans, J. A., Krumrei-Mancuso, E. J., & Rouse, S. V. (2024). What You Are Hiding Could Be Hurting You: Autistic Masking in Relation to Mental Health, Interpersonal Trauma, Authenticity, and Self-Esteem. *Autism in Adulthood*, *6*(2), 229–240. https://doi.org/10.1089/aut.2022.0115

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Field, S. L., Williams, M. O., Jones, C. R. G., & Fox, J. R. E. (2024). A meta-ethnography of autistic people's experiences of social camouflaging and its relationship with mental health. *Autism*, *28*(6), 1328–1343. https://doi.org/10.1177/13623613231223036

Funawatari, R., Sumiya, M., Iwabuchi, T., & Senju, A. (2024). Double-Edged Effects of Social Strategies on the Well-Being of Autistic People: Impact of Self-Perceived Effort and Efficacy. *Brain Sciences*, *14*(10), Article 10. https://doi.org/10.3390/brainsci14100962

Gao, S. (Stan), Brandt, S. A., & Stults, C. B. (2023). Internalized transphobia and self-concept clarity among transgender and gender-nonconforming young

adults: Characteristics, associations, and the mediating role of self-esteem. *Psychology of Sexual Orientation and Gender Diversity*, No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/sgd0000691

George, R., & Stokes, M. A. (2018a). A Quantitative Analysis of Mental Health Among Sexual and Gender Minority Groups in ASD. *Journal of Autism and Developmental Disorders*, *48*(6), 2052–2063. https://doi.org/10.1007/s10803-018-3469-1

George, R., & Stokes, M. A. (2018b). Gender identity and sexual orientation in autism spectrum disorder. *Autism*, *22*(8), 970–982. https://doi.org/10.1177/1362361317714587

Glackin, A., Pearson, A., & Davis, R. (2024). “You Are the Expert of Your Own Experience”: A Thematic Analysis of Experiences of Autism and Gender Diversity in Adulthood. *Autism in Adulthood*, *6*(3), 300–311. https://doi.org/10.1089/aut.2022.0111

Gonçalves Garcia, S., da Silveira Simões-Pires, C., Acosta Brum, J., & Centurion Cabral, J. (2025). Taking Off the Mask: Investigating Autism Diagnosis and Camouflaging in Adult Women. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0150

Green, K., Weir, E., Wright, L., Allison, C., & Baron-Cohen, S. (2025). Autistic and transgender/gender diverse people’s experiences of health and healthcare. *Molecular Autism*, *16*(1), Article 1. https://doi.org/10.1186/s13229-024-00634-0

Hall, J. P., Batza, K., Streed, C. G., Boyd, B. A., & Kurth, N. K. (2020). Health Disparities Among Sexual and Gender Minorities with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *50*(8), 3071–3077. https://doi.org/10.1007/s10803-020-04399-2

Halsall, J., Clarke, C., & Crane, L. (2021). “Camouflaging” by adolescent autistic girls who attend both mainstream and specialist resource classes:

Perspectives of girls, their mothers and their educators. *Autism*, *25*(7), 2074–2086. https://doi.org/10.1177/13623613211012819

Harmens, M., Sedgewick, F., & Hobson, H. (2022). The quest for acceptance: A blog-based study of autistic women's experiences and well-being during autism identification and diagnosis. *Autism in Adulthood*, *4*(1), 42–51. https://doi.org/10.1089/aut.2021.0016

Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis, Second Edition: A Regression-Based Approach*. Guilford Publications.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *The Behavioral and Brain Sciences*, *33*(2–3), 61–83; discussion 83-135. https://doi.org/10.1017/S0140525X0999152X

Hertel, A. W. (2017). Sources of Self-Concept Clarity. In J. Lodi-Smith & K. G. DeMarree (Eds.), *Self-Concept Clarity* (pp. 43–66). Springer International Publishing. https://doi.org/10.1007/978-3-319-71547-6_3

Higgins, J. M., Arnold, S. R., Weise, J., Pellicano, E., & Trollor, J. N. (2021). Defining autistic burnout through experts by lived experience: Grounded Delphi method investigating #AutisticBurnout. *Autism*, *25*(8), 2356–2369. https://doi.org/10.1177/13623613211019858

Hillier, A., Gallop, N., Mendes, E., Tellez, D., Buckingham, A., Nizami, A., & OToole, D. (2019). LGBTQ + and autism spectrum disorder: Experiences and challenges. *International Journal of Transgender Health*, *21*(1), 98–110. https://doi.org/10.1080/15532739.2019.1594484

Hosozawa, M., Sacker, A., & Cable, N. (2021). Timing of diagnosis, depression and self-harm in adolescents with autism spectrum disorder. *Autism*, *25*(1), 70–78. https://doi.org/10.1177/1362361320945540

Hull, L., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., Petrides, K., & Mandy, W. (2020). Gender differences in self-reported camouflaging in autistic and

non-autistic adults. *Autism*, *24*(2), 352–363. https://doi.org/10.1177/1362361319864804

Hull, L., Levy, L., Lai, M.-C., Petrides, K. V., Baron-Cohen, S., Allison, C., Smith, P., & Mandy, W. (2021). Is social camouflaging associated with anxiety and depression in autistic adults? *Molecular Autism*, *12*(1), Article 1. https://doi.org/10.1186/s13229-021-00421-1

Hull, L., Mandy, W., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the camouflaging autistic traits questionnaire (cat-q). *Journal of Autism and Developmental Disorders*, *49*(3), 819–833. https://doi.org/10.1007/s10803-018-3792-6

Hull, L., Petrides, K. V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M.-C., & Mandy, W. (2017). “Putting on My Best Normal”: Social Camouflaging in Adults with Autism Spectrum Conditions. *Journal of Autism and Developmental Disorders*, *47*(8), 2519–2534. https://doi.org/10.1007/s10803-017-3166-5

IBM Corp. (2023). *IBM SPSS Statistics for Windows* (Version 29.0.2.0) [Computer software]. IBM Corp. https://www.ibm.com/spss

INVOLVE. (2014). *Guidance on the use of social media to actively involve people in research.* Eastleigh: INVOLVE.

Jadav, N., & Bal, V. H. (2022). Associations between co-occurring conditions and age of autism diagnosis: Implications for mental health training and adult autism research. *Autism Research*, *15*(11), 2112–2125. https://doi.org/10.1002/aur.2808

Jedrzejewska, A., & Dewey, J. (2022). Camouflaging in Autistic and Non-autistic Adolescents in the Modern Context of Social Media. *Journal of Autism and Developmental Disorders*, *52*(2), 630–646. https://doi.org/10.1007/s10803-021-04953-6

Kamio, Y., Inada, N., & Koyama, T. (2012). A nationwide survey on quality of life and associated factors of adults with high-functioning autism spectrum disorders.

Autism : The International Journal of Research and Practice, *17*. https://doi.org/10.1177/1362361312436848

Keating, C. T., Hickman, L., Geelhand, P., Takahashi, T., Leung, J., Monk, R., Schuster, B., Rybicki, A., Girolamo, T. M., Clin, E., Papastamou, F., Belenger, M., Eigsti, I.-M., Cook, J. L., Kosaka, H., Osu, R., Okamoto, Y., & Sowden-Carvalho, S. (2024). Cross-cultural variation in experiences of acceptance, camouflaging and mental health difficulties in autism: A registered report. *PLOS ONE*, *19*(3), e0299824. https://doi.org/10.1371/journal.pone.0299824

Khudiakova, V., Russell, E., Sowden-Carvalho, S., & Surtees, A. D. R. (2024). A systematic review and meta-analysis of mental health outcomes associated with camouflaging in autistic people. *Research in Autism Spectrum Disorders*, *118*, 102492. https://doi.org/10.1016/j.rasd.2024.102492

Klein, J., Krahn, R., Howe, S., Lewis, J., McMorris, C., & Macoun, S. (2024). A systematic review of social camouflaging in autistic adults and youth: Implications and theory. *Development and Psychopathology*, 1–15. https://doi.org/10.1017/S0954579424001159

Klein, J., & Macoun, S. J. (2025). Person-environment fit and social camouflaging in autism. *New Ideas in Psychology*, *76*, 101112. https://doi.org/10.1016/j.newideapsych.2024.101112

Kong, H., Xie, J., Dou, F., Li, X., Wang, X., & Huang, Y. (2024). *Autistic traits and depressive symptoms in the general population: Mediating roles of social camouflaging, self-concept clarity, and self-disgus*. PsyArXiv. https://doi.org/10.31234/osf.io/drjz9

Krahn, T. M., & Fenton, A. (2012). The extreme male brain theory of autism and the potential adverse effects for boys and girls with autism. *Journal of Bioethical Inquiry*, *9*(1), 93–103. https://doi.org/10.1007/s11673-011-9350-y

Kroenke, K., Wu, J., Yu, Z., Bair, M. J., Kean, J., Stump, T., & Monahan, P. O. (2016). The patient health questionnaire anxiety and depression scale (phq-ads): Initial validation in three clinical trials. *Psychosomatic Medicine*, *78*(6), 716–727. https://doi.org/10.1097/PSY.0000000000000322

Kuper, L. E., Wright, L., & Mustanski, B. (2018). Gender identity development among transgender and gender nonconforming emerging adults: An intersectional approach. *International Journal of Transgenderism*, *19*(4), 436–455. https://doi.org/10.1080/15532739.2018.1443869

Lai, M.-C., Lombardo, M. V., Ruigrok, A. N., Chakrabarti, B., Auyeung, B., Szatmari, P., Happé, F., & Baron-Cohen, S. (2017). Quantifying and exploring camouflaging in men and women with autism. *Autism*, *21*(6), 690–702. https://doi.org/10.1177/1362361316671012

Leedham, A., Thompson, A. R., Smith, R., & Freeth, M. (2020). 'I was exhausted trying to figure it out': The experiences of females receiving an autism diagnosis in middle to late adulthood. *Autism*, *24*(1), 135–146. https://doi.org/10.1177/1362361319853442

Lei, J., Leigh, E., Charman, T., Russell, A., & Hollocks, M. J. (2024). Understanding the relationship between social camouflaging in autism and safety behaviours in social anxiety in autistic and non-autistic adolescents. *Journal of Child Psychology and Psychiatry*, *65*(3), 285–297. https://doi.org/10.1111/jcpp.13884

Lei, J., & Nocon, A. S. (2024). Are we Missing Character in Strengths-Based Approaches to Coaching and Therapy for Autistic People? *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0227

Lewis, L. F. (2017). A mixed methods study of barriers to formal diagnosis of autism spectrum disorder in adults. *Journal of Autism and Developmental Disorders*, *47*(8), 2410–2424. https://doi.org/10.1007/s10803-017-3168-3

Libsack, E. J., Keenan, E. G., Freden, C. E., Mirmina, J., Iskhakov, N., Krishnathasan, D., & Lerner, M. D. (2021). A Systematic Review of Passing as Non-autistic in Autism Spectrum Disorder. *Clinical Child and Family Psychology Review*, *24*(4), 783–812. https://doi.org/10.1007/s10567-021-00365-1

Liebowitz, M. R. (1987). *Liebowitz Social Anxiety Scale*. https://doi.org/10.1037/t07671-000

Lilley, R., Lawson, W., Hall, G., Mahony, J., Clapham, H., Heyworth, M., Arnold, S. R., Trollor, J. N., Yudell, M., & Pellicano, E. (2022). 'A way to be me': Autobiographical reflections of autistic adults diagnosed in mid-to-late adulthood. *Autism*, *26*(6), 1395–1408. https://doi.org/10.1177/13623613211050694

Livingston, L. A., Shah, P., & Happé, F. (2019). Compensatory strategies below the behavioural surface in autism: A qualitative study. *The Lancet Psychiatry*, *6*(9), 766–777. https://doi.org/10.1016/S2215-0366(19)30224-X

Loomes, R., Hull, L., & Mandy, W. P. L. (2017). What is the male-to-female ratio in autism spectrum disorder? A systematic review and meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry*, *56*(6), 466–474. https://doi.org/10.1016/j.jaac.2017.03.013

Lupindo, B. M., Maw, A., & Shabalala, N. (2023). Late diagnosis of autism: Exploring experiences of males diagnosed with autism in adulthood. *Current Psychology*, *42*(28), 24181–24197. https://doi.org/10.1007/s12144-022-03514-z

Mandy, W. (2019). Social camouflaging in autism: Is it time to lose the mask? *Autism*, *23*(8), 1879–1881. https://doi.org/10.1177/1362361319878559

Mantzalas, J., Richdale, A. L., Li, X., & Dissanayake, C. (2024). Measuring and validating autistic burnout. *Autism Research*, *17*(7), 1417–1449. https://doi.org/10.1002/aur.3129

Marocchini, E., & Baldin, I. (2024). Cross-neurotype communication from an autistic point of view: Insights on autistic Theory of Mind from a focus group study. *International Journal of Language & Communication Disorders*, *59*(6), 2465–2482. https://doi.org/10.1111/1460-6984.13095

Maroney, M., & Horne, S. (2022). “Tuned Into a Different Channel”: Autistic Transgender Adults’ Experiences of Intersectional Stigma. *Journal of Counseling Psychology*, *69*. https://doi.org/10.1037/cou0000639

McKinnon, K., Bougoure, M., Zhuang, S., Tan, D. W., & Magiati, I. (2024). Exploring the construct validity of the Camouflaging Autistic Traits Questionnaire: A factor analytic study. *Autism*, 13623613241287964. https://doi.org/10.1177/13623613241287964

McQuaid, G. A., Lee, N. R., & Wallace, G. L. (2022). Camouflaging in autism spectrum disorder: Examining the roles of sex, gender identity, and diagnostic timing. *Autism*, *26*(2), 552–559. https://doi.org/10.1177/13623613211042131

Meyer, I. H. (2003). Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Miller, D., Rees, J., & Pearson, A. (2021). “Masking Is Life”: Experiences of Masking in Autistic and Nonautistic Adults. *Autism in Adulthood: Challenges and Management*, *3*(4), 330–338. https://doi.org/10.1089/aut.2020.0083

Miller, R. A., Nachman, B. R., & Wynn, R. D. (2020a). ‘I Feel Like They are all Interconnected’: Understanding the Identity Management Narratives of Autistic LGBTQ College Students. *College Student Affairs Journal*, *38*(1), 1–15.

Miller, R. A., Nachman, B. R., & Wynn, R. D. (2020b). ‘I Feel Like They are all Interconnected’: Understanding the Identity Management Narratives of

Autistic LGBTQ College Students. *College Student Affairs Journal*, *38*(1), 1–15.

Milner, V., Colvert, E., Hull, L., Cook, J., Ali, D., Mandy, W., & Happé, F. (2023). Does camouflaging predict age at autism diagnosis? A comparison of autistic men and women. *Autism Research*, *17*(3), 626–636. https://doi.org/10.1002/aur.3059

Milner, V., Colvert, E., Mandy, W., & Happé, F. (2022). A comparison of self-report and discrepancy measures of camouflaging: Exploring sex differences in diagnosed autistic versus high autistic trait young adults. *Autism Research*, *16*(3), 580–590. https://doi.org/10.1002/aur.2873

Oredipe, T., Kofner, B., Riccio, A., Cage, E., Vincent, J., Kapp, S. K., Dwyer, P., & Gillespie-Lynch, K. (2023). Does learning you are autistic at a younger age lead to better adult outcomes? A participatory exploration of the perspectives of autistic university students. *Autism*, *27*(1), 200–212. https://doi.org/10.1177/13623613221086700

Orr, E. M. J., & Moscovitch, D. A. (2015). Blending in at the Cost of Losing Oneself: Dishonest Self-Disclosure Erodes Self-Concept Clarity in Social Anxiety. *Journal of Experimental Psychopathology*, *6*(3), 278–296. https://doi.org/10.5127/jep.044914

Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The suicidal behaviors questionnaire-revised (sbq-r):validation with clinical and nonclinical samples. *Assessment*, *8*(4), 443–454. https://doi.org/10.1177/107319110100800409

Peachey, M., & Crane, L. (2024). “I Don’t Understand Their Sense of Belonging”: Exploring How Nonbinary Autistic Adults Experience Gender. *Autism in Adulthood*, *6*(4), 462–473. https://doi.org/10.1089/aut.2023.0071

Perich, E. (2024). *Hall of Mirrors: Examining the Impact of Masking on the Concept of Self and Relationships of Adult-Diagnosed Autistic Women and Individuals*

from a Gender Minority Through Cooley's Looking Glass [Queensland University of Technology]. https://doi.org/10.5204/thesis.eprints.254565

Perry, E., Mandy, W., Hull, L., & Cage, E. (2022). Understanding camouflaging as a response to autism-related stigma: A social identity theory approach. *Journal of Autism and Developmental Disorders*, *52*(2), 800–810. https://doi.org/10.1007/s10803-021-04987-w

Pyszkowska, A. (2024). It is More Anxiousness than Role-playing: Social Camouflaging Conceptualization Among Adults on the Autism Spectrum Compared to Persons with Social Anxiety Disorder. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06416-0

Radulski, E. M. (2022). Conceptualising autistic masking, camouflaging, and neurotypical privilege: Towards a minority group model of neurodiversity. *Human Development*, *66*(2), 113–127. https://doi.org/10.1159/000524122

Rauthmann, J. F. (2021). Chapter 18 - Capturing interactions, correlations, fits, and transactions: A Person-Environment Relations Model. In J. F. Rauthmann (Ed.), *The Handbook of Personality Dynamics and Processes* (pp. 427–522). Academic Press. https://doi.org/10.1016/B978-0-12-813995-0.00018-2

Raymaker, D. M., Teo, A. R., Steckler, N. A., Lentz, B., Scharer, M., Delos Santos, A., Kapp, S. K., Hunter, M., Joyce, A., & Nicolaidis, C. (2020). "Having all of your internal resources exhausted beyond measure and being left with no clean-up crew": Defining autistic burnout. *Autism in Adulthood*, *2*(2), 132–143. https://doi.org/10.1089/aut.2019.0079

Remnélius, K. L., Neufeld, J., Isaksson, J., & Bölte, S. (2024). Does camouflaging cause reduced quality of life? A co-twin control study. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06583-0

Rios Morrison, K., & Wheeler, S. C. (2010). Nonconformity Defines the Self: The Role of Minority Opinion Status in Self-Concept Clarity. *Personality and*

Social Psychology Bulletin, *36*(3), 297–308. https://doi.org/10.1177/0146167209358075

Rødgaard, E.-M., Jensen, K., Miskowiak, K. W., & Mottron, L. (2022). Representativeness of autistic samples in studies recruiting through social media. *Autism Research*, *15*(8), 1447–1456. https://doi.org/10.1002/aur.2777

Rodgers, J. D., Lodi-Smith, J., Hill, P. L., Spain, S. M., Lopata, C., & Thomeer, M. L. (2018). Brief report: Personality mediates the relationship between autism quotient and well-being: a conceptual replication using self-report. *Journal of Autism and Developmental Disorders*, *48*(1), 307–315. https://doi.org/10.1007/s10803-017-3290-2

Rood, B. A., Reisner, S. L., Surace, F. I., Puckett, J. A., Maroney, M. R., & Pantalone, D. W. (2016). Expecting Rejection: Understanding the Minority Stress Experiences of Transgender and Gender-Nonconforming Individuals. *Transgender Health*, *1*(1), 151–164. https://doi.org/10.1089/trgh.2016.0012

Ross, A., Grove, R., & McAloon, J. (2023). The relationship between camouflaging and mental health in autistic children and adolescents. *Autism Research*, *16*(1), 190–199. https://doi.org/10.1002/aur.2859

Schneid, I., & Raz, A. E. (2020). The mask of autism: Social camouflaging and impression management as coping/normalization from the perspectives of autistic adults. *Social Science & Medicine*, *248*, 112826. https://doi.org/10.1016/j.socscimed.2020.112826

Seers, K., & Hogg, R. (2023). “Fake it ‘till you make it”: Authenticity and wellbeing in late diagnosed autistic women. *Feminism & Psychology*, *33*(1), 23–41. https://doi.org/10.1177/09593535221101455

Simcoe, S. M., Gilmour, J., Garnett, M. S., Attwood, T., Donovan, C., & Kelly, A. B. (2023). Are there gender-based variations in the presentation of Autism

amongst female and male children? *Journal of Autism and Developmental Disorders*, *53*(9), 3627–3635. https://doi.org/10.1007/s10803-022-05552-9

Soto, E. F., Orantes, D., Russo, N., & Antshel, K. M. (2024). Autism and sexual and gender minority identity in college students: Examination of self-reported rates, functional outcomes, and treatment engagement. *Autism*, *28*(6), 1519–1539. https://doi.org/10.1177/13623613241236228

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Stagg, S. D., & Belcher, H. (2019). Living with autism without knowing: Receiving a diagnosis in later life. *Health Psychology and Behavioral Medicine*, *7*(1), 348–361. https://doi.org/10.1080/21642850.2019.1684920

Stoet, G. (2010). PsyToolkit: A software package for programming psychological experiments using Linux. *Behavior Research Methods*, *42*(4), 1096–1104. https://doi.org/10.3758/BRM.42.4.1096

Stoet, G. (2017). PsyToolkit: A Novel Web-Based Method for Running Online Questionnaires and Reaction-Time Experiments. *Teaching of Psychology*, *44*(1), 24–31. https://doi.org/10.1177/0098628316677643

Sullivan, J. (2023). 'Pioneers of professional frontiers': The experiences of autistic students and professional work based learning. *Disability & Society*, *38*(7), 1209–1230. https://doi.org/10.1080/09687599.2021.1983414

Tierney, S., Burns, J., & Kilbey, E. (2016). Looking behind the mask: Social coping strategies of girls on the autistic spectrum. *Research in Autism Spectrum Disorders*, *23*, 73–83. https://doi.org/10.1016/j.rasd.2015.11.013

To, M., Zhang, Q., Bradlyn, A., Getahun, D., Giammattei, S., Nash, R., Owen-Smith, A. A., Roblin, D., Silverberg, M. J., Tangpricha, V., Vupputuri, S., & Goodman, M. (2020). Visual Conformity with Affirmed Gender or "Passing": Its Distribution and Association with Depression and Anxiety in a Cohort of

Transgender People. *The Journal of Sexual Medicine*, *17*(10), 2084–2092. https://doi.org/10.1016/j.jsxm.2020.07.019

Turnock, A., Langley, K., & Jones, C. R. G. (2022). Understanding Stigma in Autism: A Narrative Review and Theoretical Model. *Autism in Adulthood: Challenges and Management*, *4*(1), 76–91. https://doi.org/10.1089/aut.2021.0005

van der Putten, W. J. (2024). *Camouflaging in autistic adults: From measurement to mental health care*. https://dare.uva.nl/search?identifier=0dab2f8f-d0fd-4e67-a52a-6645f073449f

van der Putten, W. J., Mol, A. J., Radhoe, T. A., Torenvliet, C., Agelink van Rentergem, J. A., Groenman, A. P., & Geurts, H. M. (2024). The relationship between camouflaging and mental health: Are there differences among subgroups in autistic adults? *Autism*, *28*(4), 908–919. https://doi.org/10.1177/13623613231185402

Walsh, M. J. M., Pagni, B., Monahan, L., Delaney, S., Smith, C. J., Baxter, L., & Braden, B. B. (2022). Sex-related brain connectivity correlates of compensation in adults with autism: Insights into female protection. *Cerebral Cortex*, *33*(2), 316–329. https://doi.org/10.1093/cercor/bhac069

Warrier, V., Greenberg, D. M., Weir, E., Buckingham, C., Smith, P., Lai, M.-C., Allison, C., & Baron-Cohen, S. (2020). Elevated rates of autism, other neurodevelopmental and psychiatric diagnoses, and autistic traits in transgender and gender-diverse individuals. *Nature Communications*, *11*(1), 3959. https://doi.org/10.1038/s41467-020-17794-1

Weber, E., Hopwood, C. J., Nissen, A. T., & Bleidorn, W. (2023). Disentangling self-concept clarity and self-esteem in young adults. *Journal of Personality and Social Psychology*, *125*(6), 1420–1441. https://doi.org/10.1037/pspp0000460

White, L. C. J., Ixqe, K. V., Goodall, K., & Gillespie-Smith, K. (2024). Minority Stress, Camouflaging, and Mental Health Outcomes in Transgender and/or Non-

binary Autistic Adults. *Autism in Adulthood*. https://doi.org/10.1089/aut.2023.0151

Wood-Downie, H., Wong, B., Kovshoff, H., Mandy, W., Hull, L., & Hadwin, J. A. (2021). Sex/gender differences in camouflaging in children and adolescents with autism. *Journal of Autism and Developmental Disorders*, *51*(4), 1353–1364. https://doi.org/10.1007/s10803-020-04615-z

Wylie, P. (2014). *Very late diagnosis of asperger syndrome (autism spectrum disorder): How seeking a diagnosis in adulthood can change your life*. Jessica Kingsley Publishers.

Zhuang, S., Tan, D. W., Reddrop, S., Dean, L., Maybery, M., & Magiati, I. (2023). Psychosocial factors associated with camouflaging in autistic people and its relationship with mental health and well-being: A mixed methods systematic review. *Clinical Psychology Review*, *105*, 102335. https://doi.org/10.1016/j.cpr.2023.102335

Chapter Five

Extended Methodology and Post-hoc Analyses

Word Count: 4082

Introduction

This chapter provides additional information on the methodology of the empirical paper, including further ethical considerations, handling of missing data, and positionality. Post-hoc and exploratory analyses are also presented to supplement and elaborate on the initial findings. Additional analyses consist of exploring differences in analyses between CAT-Q subscales, testing alternative diagnostic timing variables, and the mediator effects of self-concept clarity. These findings are discussed at the end of the chapter. Feedback and comments provided by participants are also summarised within this chapter.

Additional Methodology

Measures

Camouflaging

The Camouflaging Autistic Traits Questionnaire (CAT-Q; Hull et al., 2019) is for self-report by adults over the age of 16 years old with average to higher intelligence and takes 5-10 minutes to complete. The CAT-Q loads onto a three-factor structure of masking, compensation, and assimilation behaviours. Masking includes items such as “I adjust my body language or facial expressions so that I appear relaxed”. Compensation includes items such as “When I am interacting with someone, I deliberately copy their body language or facial expressions” and “I have developed a script to follow in social situations”. Assimilation includes items such as “In social situations, I feel like I’m ‘performing’ rather than being myself”.

Acceptable internal consistencies were derived within this study for the subscales; Masking (α = .87), Compensation (α = .89), and Assimilation (α = .78). Hull et al. (2019) found a high internal consistency for the total scale (Cronbach’s α = .94) and for the subscales; Compensation (α = .91), Masking (α = .85) and Assimilation (α = .92). Hull et al. (2019) also found that the CAT-Q demonstrated

acceptable test-retest reliability over a period of three months (*r* = .77). A main effect of diagnostic group has been found, with autistic participants (*n* = 306) scoring significantly higher on the CAT-Q than non-autistic participants (*n* = 472; Hull et al., 2020). Whilst concerns related to the construct validity of the CAT-Q and its overlap with social anxiety have been expressed (Lei, Leigh, et al., 2024), support has been presented for its differentiation from most social anxiety, fear of negative evaluation, and autistic social traits (McKinnon et al., 2024).

The CAT-Q is currently the only standardised measure of camouflaging in autistic adults (Cremone et al., 2023; Hannon et al., 2023). Previous quantitative research has used observation of externalised behaviours to measure camouflaging behaviours (Dean et al., 2017; Lai et al., 2017).

Self-Concept

The self-report Self-Concept Clarity Scale (SCCS; Campbell et al., 1996) includes items such as “sometimes I feel that I am not really the person that I appear to be” and “in general, I have a clear sense of who I am and what I am”. The measure has demonstrated high internal consistency (α = .86) and test-retest reliability (*r* = .79) with a single general factor (Campbell et al., 1996). The SCCS has been used with an autistic sample (Coutelle et al., 2020), where autistic adults were found to have lower self-concept clarity.

Depression

The 9-item Patient Health Questionnaire (PHQ-9; Kroenke et al., 2016) includes items such as “little interest or pleasure in doing things”, “feeling tired or having little energy”, and “feeling bad about yourself - or that you are a failure or have let yourself or your family down”. The measure has been suggested as an appropriate tool to measure depression symptoms among autistic samples (S. R. C.

Arnold et al., 2020), and a good internal consistency (α = .89) has been found in research with autistic adults (Hull et al., 2021).

General Anxiety

The 7-item General Anxiety Disorder questionnaire (GAD-7; Spitzer et al., 2006) includes items such as “feeling nervous, anxious or on edge” and “feeling afraid as if something awful might happen”. The GAD-7 has been supported to measure the construct of anxiety within autistic samples (Robeson et al., 2024), and a high internal consistency (α = .92) has been found in research with autistic adults (Hull et al., 2021).

Social Anxiety

The self-report version of the Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) measures anxiety and avoidance of social situations such as talking with people you don’t know very well, being the centre of attention, and talking to people in authority. A high internal consistency has been found for the LSAS in clinical (α = .96), non-clinical (α = .94), and autistic (α = .96) samples (Boulton & Guastella, 2021; Fresco et al., 2001; Heimberg et al., 1999).

The LSAS was proposed to break down into two or four subscales to measure both the fear and avoidance of social and performance situations (Boulton & Guastella, 2021; Heimberg et al., 1999). However, these subscales have not been supported by all psychometric testing, and an alternative 4-factor model has been identified as social interaction, public speaking, performance/observation, and eating/drinking in public (Oakman et al., 2003; Safren et al., 1999).

Ethical Considerations

This study considered ethical principles in line with the British Psychological Society’s Code of Human Research Ethics (Oates et al., 2021).

To enable informed consent, participants were provided with an information sheet and had the opportunity to contact the lead researcher with any questions. The information sheet provided clear details on all aspects that would be needed for participants to make an informed decision about participation; this included what would be involved, confidentiality and data storage, their right to withdraw, potential benefits and risks of participating, and contact details. No deception was used as part of the study. The information sheet was also downloadable as a pdf so participants could read through and process the information at a later time. Participants provided informed consent by confirming agreement to a list of factors and then proceeding through to the questionnaire. A debrief sheet was provided after completion of the study, reminding participants of their right to withdraw, signposting for further support, and the lead researcher's contact email address. This was also downloadable as a pdf for the participants' own records.

No identifiable information was collected as part of the survey to keep participants' identities confidential. Participants created a unique identification code to enable withdrawal of their data after completion, up to the point of analysis. All data collected was stored initially on the European PsyToolkit servers and then saved securely under two-factor verification protection using OneDrive. To request a copy of the study findings, participants entered their email address using a separate link to Microsoft Forms; this data was stored separately on OneDrive and unmatchable to the questionnaire data. Only the research team, consisting of the lead researcher and two supervisors, have access to the study data. The data will be stored for a maximum of 10 years with UEA's research data repository in accordance with UEA's research data management policy.

There was minimal risk of harm through participating in the study, but participants were informed of potential psychological distress prior to taking part. The last item on the PHQ-9 asks about suicidal thoughts but high scores on this

question could not be followed up given the anonymous nature of the study. Signposting to further support was included within the information (see Appendix I) and debrief sheets (see Appendix K) to account for this.

Missing Data

Little's MCAR test was conducted to examine whether the data were missing completely at random. The results were non-significant, $\chi^2(87) = 0.000$, $p = 1.000$, indicating that the missing data can be assumed to be missing completely at random (MCAR). Missing data was handled using listwise deletion, meaning that analyses only included cases with a complete data set across the variables.

Positionality

Though positionality is commonly associated with qualitative research, its role within quantitative research is also encouraged (Jafar, 2018; Jamieson et al., 2023). This is a particularly important consideration for research relating to autistic people (Rosqvist et al., 2023) given the potential impact of power as a stigmatised group primarily studied by non-autistic researchers (Dwyer et al., 2021).

The lead author (CO) is an autistic Trainee Clinical Psychologist with lived experience of camouflaging. Reflexivity was utilised to navigate the balance between valuable insight through lived experience and potential bias in interpretations or decision making. This empirical study was carried out as part of CO's doctoral thesis, which also included conducting a systematic review looking at autistic people's experience of camouflaging and autistic burnout in relation to one another. The second and last authors are Clinical Psychologists and form CO's supervisory team. The second author (RR) previously worked clinically in an NHS neurodevelopmental assessment service. The third author (SK) is a chartered Clinical Psychologist with lived experience as a parent and was involved in a supervisory capacity during the conceptualisation stages.

Post-hoc Analyses

Multiple Comparisons

Given the multiple comparisons throughout the post-hoc analyses and a subsequent higher risk of type I errors (false positives), a false discovery rate (FDR) correction was applied to the absolute lower bootstrapped confidence intervals using the Benjamini-Hochberg procedure (Benjamini & Hochberg, 1995; Benjamini & Yekutieli, 2005). The validity of each result was then approximated based on the adjusted confidence interval and the likelihood of expansion sufficient to include zero. The FDR corrections are discussed within the reporting of each relevant finding; however, given that only approximations can be made, the results are not excluded but instead are included with caution and the implication of further study needed.

Differences Between CAT-Q Subscales

The CAT-Q loads onto three subscales that represent a different set of camouflaging strategies; Masking, Compensation, and Assimilation. Accounting for the nuanced differences between the subscales is important in building our understanding of the impact of camouflaging and the underlying mechanisms. Previous studies have found differences between the subscales in relationships with mental health and diagnosis outcomes (McQuaid et al., 2022; Moore et al., 2024). Therefore, the analyses were repeated with each of the CAT-Q subscales as the independent variable. Average scores are shown in Table 1.

Self-Concept Clarity

Bootstrapped hierarchical regression analyses (2000 samples) revealed a significant effect of each CAT-Q subscale on SCCS scores, after controlling for demographics (see Appendix P). The initial model was significantly improved by the addition of the masking subscale (ΔR^2 = .089), compensation subscale (ΔR^2 =

.037), and assimilation subscale (ΔR^2 = .063), with the final model accounting for 10.6%, 5.4%, and 8.0% of the variance in SCCS scores respectively. However, following FDR corrections using approximation, it is possible that the effect of the compensation subscale on the SCCS may not be significant.

Table 1

Descriptive Statistics of CAT-Q Subscales (n = 185)

	M	SD	Range
CAT-Q subscale			
Masking	41.56	9.25	10-56
Compensation	45.76	10.66	10-63
Assimilation	45.52	6.74	20-56

Note. CAT-Q = Camouflaging Autistic Traits Questionnaire

Depression

Bootstrapped hierarchical regression analyses (2000 samples) revealed a significant effect of the compensation and assimilation subscales on PHQ-9 scores, after controlling for demographics (see Appendix P). The initial model was significantly improved by the addition of the compensation subscale (ΔR^2 = .034) and assimilation subscale (ΔR^2 = .067), with the final models accounting for 5.7%, and 9.1% of the variance in PHQ-9 scores respectively. The masking subscale did not have a significant effect on PHQ-9 scores, β = .073, p = .197, 95% CI [-.042, .180]. Following FDR corrections using approximation, it is possible that the effect of the compensation and assimilation subscales on the PHQ-9 are also not significant.

General Anxiety

Bootstrapped hierarchical regression analyses (2000 samples) revealed no significant effects of any of the CAT-Q subscales on GAD-7 scores, after controlling for demographics (see Appendix P).

Social Anxiety

Bootstrapped hierarchical regression analyses (2000 samples) revealed a significant effect of each CAT-Q subscale on LSAS scores, after controlling for demographics (see Appendix P). The initial model was significantly improved by the addition of the masking subscale (ΔR^2 = .048), compensation subscale (ΔR^2 = .059), and assimilation subscale (ΔR^2 = .269), with the final models accounting for 9.3%, 10.4%, and 31.4% of the variance in LSAS scores respectively.

Diagnosis Age

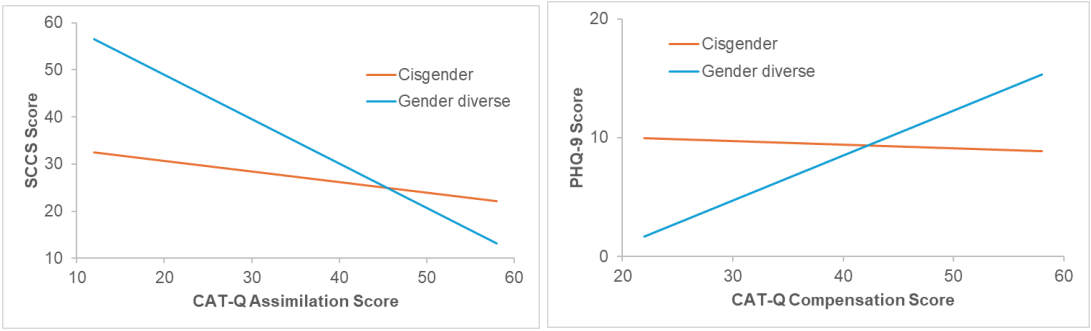
Bootstrapped hierarchical regression analyses (2000 samples) revealed no significant effects of any of the CAT-Q subscales on age of diagnosis, after controlling for demographics (see Appendix P).

Moderating Effects

Bootstrapped moderation analyses (5000 samples) estimated the moderating effects of age of diagnosis and gender diversity on the identified relationships between each of the CAT-Q subscales and the SCCS, PHQ-9, and LSAS (see Appendix Q). There were no significant moderating effects of age of autism diagnosis. Gender diversity only significantly moderated the effects of assimilation on self-concept clarity (β = -.721, 95% CI [-1.182, -.152]) and compensation on depression symptoms (β = .348, 95% CI [.157, .530]). Specifically, assimilation only had a significant effect on SCCS scores (β = -.946, 95% CI [-1.397, -.494]) and compensation only had a significant effect on PHQ-9 scores (β = .379, 95% CI [.186, .573]) for gender diverse individuals, not for cisgender individuals (see Figure 1).

Figure 1

Simple Slopes Analysis of Moderating Effect of Gender Diversity



Note. The graphs represent estimated values based on the moderation analysis using Model 1 from Hayes PROCESS i.e. predicted SCCS or PHQ-9 scores across CAT-Q assimilation and compensation scores, respectively, for both cisgender and gender diverse participants.

Alternative Diagnostic Timing Variables

Participants were asked the age that they identified themselves as being autistic to account for the time difference between identification and receiving a diagnosis (Lewis, 2017). However, this was highly correlated with age of diagnosis and as such was felt to be redundant to include in post-hoc analyses. To assess for the potential role of time after diagnosis (Corden et al., 2021), the time since diagnosis was computed as a new variable by subtracting the age of diagnosis from current age. Planned analyses were repeated with time since diagnosis in place of age of diagnosis. Descriptive statistics are shown in Table 2.

Table 2

Diagnostic Timing Descriptive Statistics (years)

	M	SD	Range
Age of diagnosis (*n* = 184)	33.15	13.24	2-65
Age of identification (*n* = 181)	30.73	12.67	4-65
Time since diagnosis (*n* = 182)	4.40	5.82	0-42

Time Since Autism Diagnosis

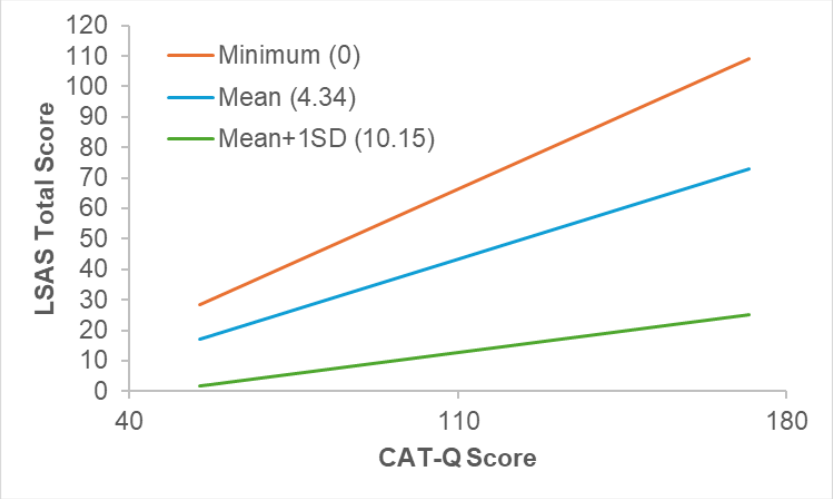
A bootstrapped hierarchical regression analysis (2000 samples) revealed no significant effect of the CAT-Q on time since diagnosis, β = -.020, *p* = .344, 95% CI [-.062, .022], after controlling for demographics (see Appendix P). Bootstrapped moderation analyses (5000 samples) examined the relationship between CAT-Q scores and SCCS, PHQ-9, or LSAS scores as moderated by time since autism diagnosis (years), controlling for demographics (see Appendix Q). There were no significant moderating effects of time since diagnosis on the effect of camouflaging on SCCS or PHQ-9. For LSAS scores, the interaction between CAT-Q scores and time since autism diagnosis was significant (β = -.048, 95% CI [-.088, -.015]), suggesting that the effect of camouflaging on social anxiety symptoms varies depending on the number of years since receiving a diagnosis of autism. However, the observed effect size was small and approximation following FDR corrections suggested that this moderator effect may not be significant after accounting for multiple comparisons.

Simple slopes analysis indicated that for the minimum number of years since diagnosis (0 years), the relationship between camouflaging and social anxiety was significant and positive (β = .688, 95% CI [.474, .902]). For the mean number of years since diagnosis (*M* = 4.34 years), the relationship remained significant and positive (β = .479, 95% CI [.319, .639]). However, for a higher number of years since diagnosis (1 *SD* above the mean = 10.15), the relationship was no longer

significant (β = .200, 95% CI [-.020, .419]). This indicates that the positive relationship between camouflaging and social anxiety weakens as time increases since diagnosis (see Figure 2).

Figure 2

Simple Slopes Analysis of Moderating Effect of Time Since Diagnosis (years)



Note. The graphs represent estimated values based on the moderation analysis using Model 1 from Hayes PROCESS i.e. predicted LSAS scores across CAT-Q scores for time since diagnosis at the minimum, mean, and mean + 1 *SD* values.

The Mediating Role of Self-Concept Clarity

Camouflaging was found to account for a significant proportion of depression and social anxiety symptoms; however, the mechanisms underlying these relationships were not explored. Identifying how these factors interlink would develop our understanding of the impact of camouflaging and further inform clinical implications for supporting autistic adults.

Self-concept clarity was also partially explained by camouflaging and may contribute to its relationship with mental health outcomes. Self-concept clarity has been found to have predictive value of both depression (Treadgold, 1999; Wong et al., 2019) and social anxiety (Krupa, 2018; Stopa et al., 2010). A low self-concept clarity and lacking a stable sense of self may relate with factors associated with depression such as lack of meaning, dissatisfaction in relationships, and low self-worth (Kopala-Sibley & Zuroff, 2020). Low self-concept clarity may also heighten social anxiety through fear of being perceived as inauthentic and increased focus on self-presentation in social situations.

Therefore, mediation analyses were conducted to test the mediating effect of self-concept clarity on the relationships between camouflaging and both depression and social anxiety. Bootstrapped mediation analyses were carried out using model 4 of the PROCESS Macro (A. F. Hayes, 2017) on SPSS.

Depression

The total effect of CAT-Q scores on PHQ-9 scores was significant, β = .063, p = .012, 95% CI [.015, .114]. However, the direct effect of CAT-Q scores on PHQ-9 scores was non-significant, β = .025, p = .301, 95% CI [-.022, .077], whilst controlling for SCCS scores. The indirect effect of CAT-Q scores on PHQ-9 scores through SCCS scores was significant, β = .038, 95% CI [.015, .066], suggesting that self-concept clarity significantly fully mediates the relationship between

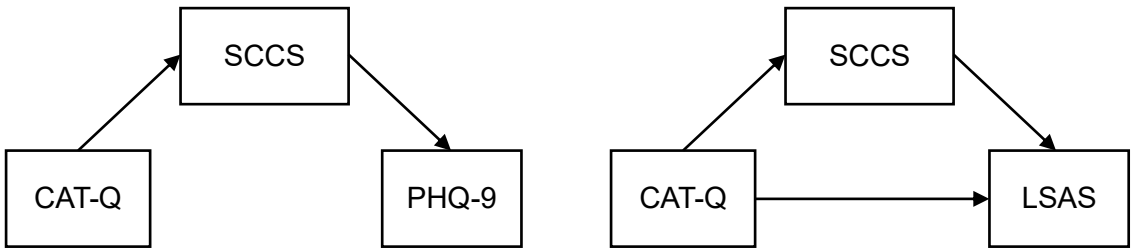
camouflaging and depressive symptoms. Specifically, higher camouflaging is associated with lower self-concept clarity which is then associated with higher depressive symptoms (see Figure 3). However, the observed effect sizes were small which is suggestive of potentially limited practical relevance.

Social Anxiety

The total effect of CAT-Q scores on LSAS scores was significant, β = .432, *p* <.001, 95% CI [.247, .611]. The direct effect of CAT-Q scores on LSAS scores was also significant, β = .341, *p* <.001, 95% CI [.143, .531], whilst controlling for SCCS scores. The indirect effect on CAT-Q scores on LSAS scores through SCCS scores was significant, β = .091, 95% CI [.025, .184], suggesting that self-concept clarity significantly partially mediates the relationship between camouflaging and social anxiety. Specifically, higher camouflaging is associated with higher social anxiety directly, but also indirectly through a negative effect on self-concept clarity (see Figure 3). Though the observed indirect effect size was small, suggestive of it being less practically meaningful.

Figure 3

Significant Direct and Indirect Effects using Model 4 of Hayes PROCESS



Discussion

All three of the CAT-Q subscales were found to have significant predictive value on SCCS scores, with masking and assimilation having a larger effect than compensation. This makes sense as masking can be referred to as hiding aspects of yourself and assimilation can involve putting on an act, both of which may feel more inauthentic and have more of an impact on self-concept clarity than compensating by using learned social skills. Only assimilation and compensation were found to have a significant effect on PHQ-9 scores, suggesting that masking is not significantly related to depression. This is partially supported by findings of no association between masking and depression, though only an association was found for assimilation, not compensation (Moore et al., 2024). This effect on depression may be reflective of exhaustion caused by the energy consuming nature of specific assimilation strategies and a sense of thwarted belonging (Bradley et al., 2021; S. A. Cassidy et al., 2020). All three of the CAT-Q subscales were found to have a significant effect on LSAS scores, with assimilation accounting for much more variance in social anxiety than masking and compensation. This is similar to previous findings that assimilation correlates with social anxiety more highly than masking and compensation (Hull et al., 2019). However, this may reflect potential construct overlaps between the avoidance mechanisms within the assimilation subscale and social anxiety (McKinnon et al., 2024).

The moderator analyses indicated that the moderating effect of gender diversity on self-concept clarity and depression is only applicable to assimilation and compensation respectively. Both effects were found to only be significant for gender diverse individuals but not cisgender individuals. For gender diverse people, the disconnect between authentic and external portrayal due to assimilation may be more significant than for cisgender people due to the compounding impact of multiple marginalised identities, impacting on self-concept clarity (Kuper et al.,

2018). The additional minority stress experienced by autistic gender diverse individuals may result in much more energy expenditure, exacerbating the effortful nature of compensation compared to cisgender autistic people, leading to depression. Further, gender diverse individuals may feel more pressure to appear competent socially to mitigate additional negative judgement based on their gender identity, heightening the association between compensatory behaviours and depressive symptoms. Further exploration of role of intersectionality on the impact of camouflaging in autistic people is indicated.

Time since diagnosis was found to moderate the effect of camouflaging on social anxiety scores, suggesting that as time progresses since diagnosis, the relationship weakens. A greater time elapsed since diagnosis is related to less dissatisfaction with autistic identity (Corden et al., 2021), implying that the self-acceptance and consolidation following diagnosis may be impacting on subsequent camouflaging and social anxiety. This suggests potential helpful implications for post-diagnostic support, such as helping recently diagnosed autistic people make sense of their camouflaging experience and offering support related to social anxiety. Further, promoting self-acceptance and autistic identity consolidation post-diagnosis may help reduce the perceived need to camouflage and mitigate associated social anxiety. However, there is the possibility that the moderator effect was overestimated and should be interpreted with caution. Further, the time since diagnosis was significantly positively skewed and, whilst bootstrapping was used to account for non-normality, the representation and power of findings is limited as time since diagnosis increases. Accounting for these statistical limitations, this finding relating diagnostic timing with the effect of camouflaging on social anxiety warrants further investigation to develop an understanding of potential complex relationships, ensuring a large enough sample to detect small effect sizes and representativeness of time since diagnosis.

Self-concept clarity was found to fully mediate the effect of camouflaging on depression, indicating that camouflaging does not lead directly to depression, but rather is due to the negative impact on self-concept clarity. This is supported by Kong et al.'s (2024) findings with a Chinese autistic sample as part of a serial mediation analysis of autistic traits on depression through camouflaging and self-concept clarity; no direct effect was found between camouflaging and depression, but an indirect effect through self-concept clarity was supported. In this study, self-concept clarity was also found to partially mediate the effect of camouflaging on social anxiety, indicating that camouflaging does directly affect social anxiety, but also predicts increased social anxiety through a negative effect on self-concept clarity. Mental health professionals supporting autistic adults with depression or social anxiety symptoms should consider addressing any presenting issues with self-concept clarity and explore the role of camouflaging as part of this. Although these findings should be interpreted with caution due to potential overestimation of the indirect effects, indicating a need for future research to investigate these relationships further.

Participant Feedback

After completing the questionnaire, participants were given the option to provide any feedback or comments on the research. Prompts were given relating to the experience of taking the questionnaire, ways this could be improved, and ideas for future research on autistic camouflaging. Overall, 80 participants provided qualitative feedback which has been summarised here. This feedback was also considered as part of developing the limitations and implications for further research sections of the empirical paper.

Ten participants left positive feedback on the questionnaire, including the design and format, clear instructions, and use of a progress bar. Positive comments

were also made about being asked about language preference, option to provide feedback, and how the LSAS links anxiety to different situations.

The most common criticism related to the LSAS, with 16 participants commenting on the item wording “trying to pick up someone” and seven participants describing the lack of nuance captured by the measure. Similarly, five participants fed back on the difficulty completing questionnaires due to the hypothetical nature of questions and items being taken literally, and three participants noted the reductionist nature of quantitative research. A small number of comments were made about specific measures or demographic questions, such as being asked about sex assigned at birth (3 participants). One participant commented on the use of measures that are used in several different studies and the repetitive nature of this as a participant. There were comments made about technical issues by five participants, such as the lack of back button and difficulties participating on a mobile device. Three participants shared their experience reducing camouflaging since diagnosis which was not captured within the questionnaire. Other critical feedback related to needing definitions of key terms, the exclusion of self-identifying autistic people, a lack of open-ended questions, and lack of reimbursement for participating.

Several suggestions were made for areas to consider for further research:

- The development and presentation of camouflaging – role of punishment in development of camouflaging, an unconscious response rather than conscious choice, self-assessed competency of camouflaging, adaptation overtime, impact of multiple diagnoses (e.g. ADHD and autism);
- The impact of camouflaging in different situations – in employment and the workplace, within intimate relationships, during support needs assessments, within group coherence activities;

- The differentiation in camouflaging between different contexts – childhood compared with adulthood, with people of different neurotypes, consideration of the double empathy problem;
- Factors that link with camouflaging – alexithymia, autistic burnout, autistic identity, connection, trauma, physical health conditions, negative coping mechanisms, attitudes towards power and hierarchies, attunement to others, and dishonesty.

Chapter Six

Discussion and Critical Evaluation

Word Count: 4618

Discussion and Critical Evaluation

This chapter aims to consolidate the findings of the systematic review and empirical paper. Implications for clinical practice, further research, and theory will be considered in addition to critical evaluations of each paper. Final reflections on the process of conducting the research are also discussed.

Researcher Reflections

Throughout the thesis process, I was conscious of the need to balance my position as both an autistic person and a researcher in clinical psychology. Research on the experiences of autistic people can be enhanced through the involvement of autistic researchers (Dwyer et al., 2021; Jones, 2021). My lived experience of camouflaging offers valuable insight into the nuanced impact it can have on sense of identity, mental health, and burnout. This was important and helpful in interpreting the findings through a deeper understanding of credible explanations that might otherwise be missed. However, I was mindful of the need to mitigate potential bias by ensuring the research was aligned with existing literature and interpretations were grounded in the data rather than personal assumptions. Through immersing myself in the current literature and maintaining reflexivity, I aimed to be able to apply my own insight meaningfully whilst upholding academic rigour.

I found conducting the systematic review to be a profoundly meaningful process through being able to reflect the voices of so many autistic people on a topic I am passionate about. However, this was also emotionally taxing at times due to the empathy I felt for each participant and reflections I could make on my own lived experience. This evoked a strong sense of justice on behalf of all autistic people which was overwhelming to cope with but strengthened my determination to contribute to systemic change through the review itself.

The recruitment process as part of my empirical research study highlighted both encouraging and difficult considerations. It was heartwarming and motivating to hear prospective autistic participants feedback on the positive impact and importance of research in this area. However, it was also disappointing to hear from so many autistic people unable to participate due to need to have an official diagnosis. I understand from personal experience the lengthy process and barriers to reaching the assessment stage, and the invalidation felt throughout the necessary period of self-identification prior to receiving a diagnosis; yet it was decided to include only those with an official diagnosis to maintain a clear focus in line with the aims of the research and ensure methodological rigour. Whilst this exclusion criterion was needed from a research perspective, the lack of alignment with the values of the autistic community has felt difficult to reconcile.

I was enthusiastic to be contributing to the emerging area of research on autistic burnout and current surge of camouflaging research in general. It has been rewarding to feel part of this momentum within the context of a currently evolving, dynamic field of autism research. Despite the challenges and uncertainty experienced whilst working with relatively new, ambiguous concepts, I was excited to be involved in the process of building upon our understanding and aligning research with the weight of these experiences for the autistic community.

Summary of Findings

The general aim of this thesis was to explore the impact of camouflaging on factors related to wellbeing, self-concept clarity, and diagnosis age in autistic people, through conducting a systematic review and an empirical research study. The systematic review aimed to understand how camouflaging and autistic burnout are experienced in relation to one another by autistic people. The empirical paper aimed to explore the impact of camouflaging on self-concept clarity, psychological

wellbeing, and age of diagnosis in autistic adults, and identifying potential moderators of these relationships.

Outcome of Systematic Review

As part of the narrative synthesis, the thematic analysis revealed four themes, with two subthemes: ‘the energy cost of camouflaging’; ‘burnout: camouflaging takes its toll’ with the subtheme ‘too drained to disguise’; ‘time and space to recharge’ with the subtheme ‘unmasking is a balancing act’; and ‘the autistic struggle’. The energy consuming and exhausting nature of camouflaging was highlighted, explaining its progression to autistic burnout. Allowing time and space to recharge from camouflaging was suggested to mitigate its toll and prevent autistic burnout. The concept of unmasking was presented as both a proactive strategy to manage energy levels and a forced experience subsequent to the onset of autistic burnout. Unmasking was a complex process to navigate and involved a balance between positive implications and negative consequences. These processes were encapsulated within the experiences of autistic people, in which the consequences of camouflaging were described as stronger and uniquely relating to autistic burnout.

Outcome of Empirical Paper

The empirical paper findings indicated a significant effect of camouflaging on self-concept clarity, depression, and social anxiety, but no significant effect on general anxiety or age of diagnosis. Gender diversity had a significant moderator effect on camouflaging’s relationships with self-concept clarity and depression, where the effect of camouflaging on self-concept was stronger for gender diverse individuals and the effect on depression was only significant for gender diverse individuals compared to cisgender individuals. Age of diagnosis did not moderate any effect of camouflaging.

Post-hoc analyses looking at the effect of different factors of camouflaging found that masking had a significant effect on self-concept clarity and social anxiety, and both compensation and assimilation had a significant effect on self-concept clarity, depression, and social anxiety. Gender diversity was found to only moderate the effect of assimilation on self-concept clarity and compensation on depression, whereby the effects were only significant for gender diverse individuals, not for cisgender individuals. Further post-hoc analyses using time since diagnosis in place of diagnosis age found no significant effect of camouflaging on time since diagnosis. A potential moderating effect of time since diagnosis on the relationship between camouflaging and social anxiety, indicating that the positive relationship weakens as time increases since diagnosis.

Exploratory mediation analyses looked at the mediating effect of self-concept clarity on the relationship between camouflaging and depression or social anxiety. Self-concept clarity was found to fully mediate the effect of camouflaging on depression, where higher camouflaging is associated with lower self-concept clarity which is then associated with higher depressive symptoms. Self-concept clarity was found to partially mediate the effect of camouflaging on social anxiety where higher camouflaging is associated with higher social anxiety directly, but also indirectly through a negative effect on self-concept clarity.

Strengths and Limitations

Systematic Review

Narrative synthesis was chosen as an accepted and accessible method for conducting a synthesis of qualitative data (J. Edwards & Kaimal, 2016). The synthesis was informed by Popay et al.'s (2006) guidance which aims to provide an overarching framework for conducting narrative synthesis and range of approaches to enhance the synthesis. The use of thematic analysis as a method of synthesising

the findings of included studies allowed a robust, systematic framework for coding qualitative data (Braun & Clarke, 2014) and was suitable in answering the review questions by exploring autistic people's experiences (Clarke & Braun, 2017). However, thematic analysis as part of a systematic review uses secondary data rather than the initial primary data provided by the autistic participants themselves. Therefore, the synthesis findings were further vulnerable to the influence of author interpretation through coding qualitative findings already subject to interpretation bias by researchers across multiple studies. Additionally, the thematic analysis itself was conducted by the first author before consultation with the primary supervisor which limits certainty in prevention of bias; though, there was strength in the consideration of positionality and researcher's reflections on the impact of their own experiences on the interpretations made.

The utilisation of the GRADE-CERQual is a strength through transparently assessing the confidence that stakeholders can have in the review findings. The GRADE-CERQual aims to systematise the process of assessing confidence in individual review findings of qualitative data synthesis (Lewin et al., 2018) and is applicable to a wide range of topics or qualitative synthesis types (Wainwright et al., 2023). The assessment indicated high confidence in two findings and moderate confidence in four findings, suggesting that it is likely that the findings are a reasonable representation of autistic people's experience of camouflaging and autistic burnout in relation to one another. Although, whilst assessment of methodological limitations for each finding utilised the dual rated quality appraisals, the remaining GRADE-CERQual processes were completed only by the first author and were subsequently more vulnerable to bias. Consideration of factors involved in decision-making throughout each stage of the assessment process were well documented to mitigate this risk of bias.

Autistic burnout is still being conceptualised, with recently established definitions currently being refined. As such, it was difficult to ensure that the search strategy captured all studies with relevant data whilst also avoiding overlap with related but distinct constructs, such as depression. The search criteria focussed on the key aspects of exhaustion and reduced functioning experienced in autistic burnout; however, autistic burnout is not synonymous with exhaustion and is a multi-faceted experience, so less frequently cited factors associated with autistic burnout would have been omitted, such as confusion, memory loss, and increased autistic traits. Regardless, this limitation should not suggest reason to deter from exploring autistic burnout but rather highlights the very importance of investigating it further in contributing to its refinement and developing our understanding. Further, whilst there have been no studies exploring the relationship between autistic burnout and camouflaging specifically, this synthesis of circumstantial data was needed to set the scene of our current understanding and demonstrate the value of further exploration. Moreover, this approach promoted external validity pivotal in aligning current research with the shared experiences being discussed within the autistic community.

The demographic information about participants known and reported varied across the included studies, so the generalisability of the review findings is limited and uncertain. Where reported, the majority of participants were white or Caucasian and from an Anglo culture; therefore, the experiences of autistic people from under-represented ethnic groups and cultures may not be represented in these findings. Many participants had achieved university education and had the cognitive ability to participate through self-report, and therefore is not representative of the autistic population which encompasses people from a range of cognitive abilities, support needs, and education or employment opportunities. The small proportion of known gender diverse participants in the overall sample may also be an under-

representation as the autistic population have a higher rate of gender diversity compared to the non-autistic population (George & Stokes, 2018b; Warrier et al., 2020). Given these limitations, caution should be applied when generalising the findings as the experiences of autistic people.

Empirical Paper

The empirical study utilised a quantitative method to explore the impact of camouflaging which enabled mechanisms previously reported qualitatively to be investigated empirically. This advanced our understanding of how camouflaging may relate with factors of self-concept, psychological wellbeing, and diagnostic timing. Further, this is the first study to the author's knowledge to quantitatively measure the relationship between camouflaging and self-concept clarity in English speaking autistic adults. This finding is a strength as it offers further clarity on how camouflaging may affect a sense of identity or knowing 'who you are', as described by autistic people.

The recruitment target was achieved and a relatively large sample size participated in the research which allowed planned analyses to be conducted sufficiently. The majority of participants were assigned female at birth which was unexpected given the 3:1 male to female ratio reported across the general autistic population (Loomes et al., 2017). Whilst this is positive in representing the typically excluded female autistic experience (Shefcyk, 2015), it is also indicative of sampling bias subsequent to recruitment through social media (Rødgaard et al., 2022). More than a quarter of the sample identified as gender diverse; whilst this may be illustrative of further sampling bias, this is not inherently a limitation as there is a high co-occurrence of autistic and gender diverse identities in comparison to the non-autistic population (George & Stokes, 2018b; Warrier et al., 2020) and it is demonstrative of considerations around intersectionality (Mittertreiner et al., 2024). Similarly to the systematic review and previous camouflaging research (Libsack et

al., 2021; Zhuang et al., 2023), most of participants were white from Anglo cultures, had attained university-level education, and had the cognitive ability to participate through self-report. This limits the generalisability of the findings across the autistic adult population as the sample is under-representative of autistic people from ethnically diverse backgrounds and with a learning disability.

A diagnosis of autism was required to be able to participate; however, this excluded undiagnosed autistic people and so the findings cannot be reflective of the experiences of autistic adults across difference stages of the identification process. Further, the diagnoses were self-reported and not verified, and though participants completed the AQ-10 to supplement this, certainty in the diagnosis validity or reported age of diagnosis is limited. Only a small number of participants received their diagnosis in childhood and most participants had been recently diagnosed which limits the generalisability to autistic adults diagnosed as a child and the applicability of the diagnostic timing variables. Positively, though, participants were not excluded from participating on the basis of co-occurring neurodevelopmental conditions or mental health difficulties which is representative of the experiences of autistic people (Lai et al., 2014).

Whilst each measure had been used previously with autistic samples and demonstrated sound reliability in this study, the findings are dependent on, and limited by, the construct validity of each measure in reflecting the autistic participants' experiences. The cross-sectional design meant that only current experiences were measured, and the longitudinal impact of camouflaging could not be captured. This also means that nuanced differences across contexts were not accounted for, such as varying levels of camouflaging depending on the neurotype of others (Crompton, Ropar, et al., 2020; Funawatari, Sumiya, Iwabuchi, Nishimura, et al., 2024; Marocchini & Baldin, 2024). Further, causation and directionality of the relationships cannot be determined, which omits the potential effect of additional

factors related to camouflaging, such as past interpersonal trauma (J. A. Evans et al., 2024) and minority stress (White et al., 2024).

Theoretical Implications

Camouflaging was found to be energy consuming and ultimately contribute to autistic burnout. This may align with the spoon theory (Miserandino, 2013) which would propose that autistic people have a finite energy resource, measured in spoons, and that activities such as camouflaging would use those spoons throughout the day. This effortful nature of camouflaging has also been suggested in terms of 'monotropsim' theory, which proposes that autistic people have intense focussed attention but difficulties shifting attention across multiple stimuli (Murray et al., 2005), explaining the cognitive energy required in relation to camouflaging through needing to shift their presentation across contexts (Pearson & Rose, 2021). Reduced camouflaging could also be forced following the onset of autistic burnout, which is indicative of a dynamic, rather than linear, relationship between the two concepts. This is reflected through the decision-making model applied to camouflaging (Giroux et al., 2024), whereby the personal cost during autistic burnout would make camouflaging unsustainable compared to the social gain which is stronger at other times.

Higher levels of camouflaging related with lower self-concept clarity, as supported by previous qualitative reports (Hull et al., 2017; Lilley et al., 2022; Schneid & Raz, 2020; Seers & Hogg, 2023; Tierney et al., 2016). Further, issues related to self-concept were presented in the context of autistic burnout, prompting the following hypothesis that the association between camouflaging and autistic burnout may be through the impact of camouflaging on self-concept clarity. This is supported by Pearson and Rose's (2021) conceptual model which proposes a pathway from camouflaging to autistic burnout through a disconnection from identity.

The effect of camouflaging on self-concept clarity may further be linked with the identified complexities of unmasking. Perich (2024) explored camouflaging applied to Cooley's (1922) 'looking glass self' and found the 'empty mirror effect' where the autistic participants were unsure of their identity underneath the mask. This was linked to a theme around a 'catch-22 effect of unmasking' where they needed to face the 'empty mirror' and learn about their authentic selves before feeling able to be vulnerable in sharing this identity with others. The complexities related to unmasking may also be explained through stigma theory (Goffman, 1963) and the minority stress model (Botha & Frost, 2020; Meyer, 2003). Concealment of autistic traits through camouflaging may be a necessary survival mechanism (Cleary et al., 2023; Lawson, 2020) for safety from rejection or discrimination (Cage & Troxell-Whitman, 2019; Pearson et al., 2023; Radulski, 2022; Schneid & Raz, 2020; Seers & Hogg, 2023).

The finding that camouflaging predicts depression and social anxiety is in line with previous findings that camouflaging negatively impacts on mental health (Bernardin, Lewis, et al., 2021; Bowri et al., 2021; Hull et al., 2021). The lack of an effect on general anxiety, despite a relationship with social anxiety, suggests that camouflaging may impact psychological wellbeing specifically through mechanisms related to social evaluation and the threat of rejection. Given that these are central features of minority stress, this interpretation is supported by findings that the effect of camouflaging on mental health loses significance when accounting for the impact of minority stress (White et al., 2024), This would reinforce the idea that autistic people's vulnerability to mental health difficulties may be reflective of navigating society as a marginalised group (Botha & Frost, 2020). Although, the relationship between camouflaging and social anxiety may also be reflective of construct overlap between camouflaging strategies and social anxiety safety behaviours (Lei, Leigh,

et al., 2024) or the use of camouflaging to cope with existing social anxiety (Pyszkowska, 2024).

The impact of intersectionality was highlighted through the moderating effect of gender diversity. Gender diverse autistic people must navigate the compounding impact of inauthentic portrayal through camouflaging multiple marginalised identities, needing to pass as both neurotypical and cisgender (Maroney & Horne, 2022; R. A. Miller et al., 2020c). Within the framework of the minority stress model (Meyer, 2003), this could be understood as the impact of both distal and proximal stressors on psychological wellbeing, including chronic stigma and prejudice, expecting rejection, and identity concealment. Specifically for gender diverse autistic people, camouflaging may serve as a form of concealment of both autistic and gender diverse identities, functioning as a protective mechanism against internalised stigma and expected discrimination. The finding that gender diversity strengthens the association between camouflaging and poorer wellbeing is in line with the model, reflecting the inter-connectedness and additive effect of marginalised identity stress on wellbeing.

Age of diagnosis was not predicted by camouflaging and did not moderate the effects of camouflaging which challenges the notions that higher camouflaging may delay diagnosis age (Halsall et al., 2021; Hull et al., 2017; Livingston et al., 2019; McQuaid et al., 2022) or that an earlier diagnosis may reduce camouflaging and alleviate negative outcomes associated with camouflaging (Botha et al., 2022; Leedham et al., 2020; Stagg & Belcher, 2019). Diagnosis itself may not negate the social pressures to camouflage, which would imply a higher significance of environmental safety to unmask and feeling accepted to be authentically themselves (Davidson & Henderson, 2010; Frost et al., 2019; Turnock et al., 2022). The impact of a diagnosis and consolidation of an autistic identity is a gradual process (Botha et al., 2022; Wylie, 2014), likely confounding any moderating effect

of diagnosis age alone. An effect of camouflaging on delaying diagnosis may be more apparent across different ages prior to identification, after which the known influence of a diagnosis may nullify the impact of camouflaging. Intended use of camouflaging does not always reflect the perceptions of others (Belcher et al., 2022) and the latter is likely to be more influential in delaying identification of autistic traits, rather than self-reported use of camouflaging strategies.

Further, this alludes to broader individual differences in the experience of camouflaging, which should be considered when conceptualising its impact for autistic people and implications for support. While some autistic individuals describe camouflaging as involving highly effortful, conscious strategies, others experience it as more automatic and habitual, requiring differing levels of cognitive demand and energy resource (Field et al., 2024). Personal appraisals of camouflaging also vary; some individuals express satisfaction or relief in their ability to mask, whereas others report feelings of distress, inauthenticity, or shame (Hull et al., 2017). An individual's intent to camouflage, the effort involved, and the apparent 'success' do not always align, as observable behaviours may differ significantly from the invisible, internal processes experience by the individual (Halsall et al., 2021). These nuanced individual differences highlight potential limitations in measuring camouflaging as a single construct, instead demonstrating the importance of recognising it as a contextually shaped process, unique to each individual autistic person.

Clinical Implications

Camouflaging may lead to negative consequences related to autistic burnout, self-concept clarity, depression, and social anxiety. Whilst reducing camouflaging may be helpful in prevention of burnout and promoting more positive outcomes, there are complexities related to unmasking. It may not be safe for autistic people to stop camouflaging and embrace their authentic selves, putting

them at risk of stigma and discrimination (Cleary et al., 2023; Radulski, 2022). Therefore, addressing stigma through promoting societal change and working toward autism acceptance and inclusion should help alleviate the burden on autistic people to continue camouflaging. Implementing neurodiversity affirming accommodations will help reduce stigma through visibility and supporting autistic people to feel able to be authentically themselves (Turnock et al., 2022), further enhancing the person-environment fit (Klein & Macoun, 2025). These implications can be extended to reasonable adjustments and workplace accommodations, highlighting the importance of neurodiversity affirming policies that both reduce the pressure to camouflage and account for the energy draining nature of automatic camouflaging (Kidwell et al., 2023; Pryke-Hobbes et al., 2023). This could include alternative methods of communication, low stimulation spaces to recharge, flexible working, and ensuring performance evaluations are not based on neurotypical norms (Burton et al., 2022; Khalifa et al., 2020; Khan et al., 2023; Lindsay et al., 2021).

Mental health professionals should consider the role of camouflaging when supporting autistic people, potentially utilising screening measures of camouflaging (e.g. CAT-Q). This understanding should be individually formulated, incorporating their experiences of social pressures to camouflage, the impact it has for them, and potential risks of unmasking. When offering support to autistic people, decisions about suitable interventions should account for camouflaging demands and safety to unmask. Commonly suggested interventions for depression and social anxiety, such as increasing activity level and social engagement, may not be helpful as they do not consider the energy consuming nature of camouflaging and the threats related to being authentically autistic. Rather, clinicians should consider the nature of approaches and recommendations made; for example, engagement with other autistic people can help to safely promote authentic socialisation without the same

repercussions on energy levels (J. Cook et al., 2021; Crompton, Ropar, et al., 2020; Howard & Sedgewick, 2021).

Support focussed on developing self-identity and moving towards self-acceptance may be valuable in addressing the impact of camouflaging on self-concept clarity (Lei & Nocon, 2024; van der Putten, 2024). This support could be delivered through individual formulation and therapy (Lei, Cooper, et al., 2024), post-diagnostic psychoeducation (Bransgrove & Karakas, 2025), or peer-led spaces, and should utilise a neurodiversity-affirming lens (C. Edwards et al., 2025; Flower et al., 2025). Therapeutic approaches that promote the development of personal values, authentic self-expression, and self-compassion may be indicated, such as Acceptance and Commitment Therapy (S. C. Hayes & Pierson, 2005) and Compassion-focussed Therapy (Gilbert, 2009).

Additionally, these implications should extend with the compounding impact of gender diversity on the impact of camouflaging. Clinicians working with autistic adults should account for the role of gender identity, and how both stigmatised identities are experienced in the context of camouflaging. Support should aim to be both neurodiversity- and gender-affirming to promote acceptance and safety of authentic expression related to each aspect of identity (Hadland et al., 2023). Similarly, the stigma related to gender diversity also needs to be addressed within society, including safe spaces for gender diverse autistic people within each respective community (Hillier et al., 2019; Maroney & Horne, 2022).

Directions for Future Research

The systematic review identified potential relationships between camouflaging and autistic burnout but there has not been any research on this specifically. Further research should directly explore how autistic people experience camouflaging and autistic burnout in relation to one another. This should aim to

understand more about underlying mechanisms of the pathway from camouflaging to autistic burnout, and protective factors which buffer against the impact of camouflaging. This could be expanded on by exploring how camouflaging relates with each of the BIMS (burnout, inertia, meltdowns, shutdown), given their overlapping, cyclical nature (Phung et al., 2021). Additionally, the role of self-concept clarity within the relationship between camouflaging and autistic burnout should be studied to identify any potential mediator effect.

Further to this, research should aim to explore the complex role of unmasking. This could include developing our understanding of unmasking as both a proactive and reactive process, the factors which may impact on how unmasking is experienced as either empowering or distressing, and the psychosocial consequences of unmasking across different contexts. Expanding on our understanding of unmasking could help to assess the benefit of integrating unmasking into therapeutic interventions and how to implement the process in a gradual, safe way.

Research is needed to further explore the role of intersecting identities on the impact of camouflaging. This should consider the role of gender diversity as demonstrated in the empirical paper, as well as other marginalised identities, such as underrepresented racial and ethnic backgrounds (Nelson, 2024) and additional disabilities. Moreover, any further research should also aim to be inclusive of under-represented autistic people in camouflaging research in order to explore the experiences of, and impact of intersecting identities on, autistic people from a range of ethnically diverse and socioeconomic backgrounds and with varying cognitive abilities and support needs.

Whilst camouflaging was found to effect self-concept clarity, depression, and social anxiety, further longitudinal research is needed to explore the directional and causal mechanisms. This should include understanding how the impact of

camouflaging changes over time and whether the effects are reversible after a reduction in camouflaging. In particular, the relationship between camouflaging and diagnostic timing should be studied using a longitudinal design, inclusive of people both pre- and post-diagnosis. This research should aim to understand: the effect of different facets of camouflaging on diagnosis age, such as observed traits compared to camouflaging intent, and conscious compared to unconscious strategies; the role of age of self-identification and time since diagnosis rather than just diagnosis age; and potential mitigating factors in these relationships, such as access to support and acceptance within the social environment.

Dissemination

Both the systematic review and empirical paper have been prepared with the aim to submit for publication to journals. A lay summary of each paper will be shared with the participants who opted in to receive the findings and further disseminated amongst the autistic community.

Overall Conclusion

The aim of this thesis was to explore the impact of camouflaging in autistic people. A systematic review explored how camouflaging and autistic burnout are experienced in relation to one another by autistic people. The thematic analysis of qualitative data from included studies found four themes, with two subthemes: ‘the energy cost of camouflaging’; ‘burnout: camouflaging takes its toll’ with the subtheme ‘too drained to disguise’; ‘time and space to recharge’ with the subtheme ‘unmasking is a balancing act’; and ‘the autistic struggle’. An empirical study was conducted aiming to explore the impact of camouflaging on self-concept clarity, psychological wellbeing, and age of diagnosis in autistic adults, and identify potential moderators of these relationships. Camouflaging was found to significantly predict self-concept clarity, depression, and social anxiety symptoms, and gender

diversity had a significant moderator effect on camouflaging's relationship with both self-concept clarity and depression. Further post-hoc analyses were suggestive of mediator effects of self-concept clarity on the relationship between camouflaging and depression or social anxiety. These findings have implications for mental health professionals working with autistic adults, highlighting the role of camouflaging in mental health difficulties, awareness of autistic burnout, and the potential value of self-concept clarity support. Further consideration is needed for the experiences of gender diverse autistic individuals and the role of intersecting minority identities on the impact of camouflaging. Future research should aim to explore the impact of camouflaging using a longitudinal design and improve representation of autistic people with a range of cognitive abilities, and ethnic and socioeconomic backgrounds.

Thesis Portfolio References

Ai, W., Cunningham, W. A., & Lai, M.-C. (2022). Reconsidering autistic 'camouflaging' as transactional impression management. *Trends in Cognitive Sciences*, *26*(8), 631–645. https://doi.org/10.1016/j.tics.2022.05.002

Allison, C., Auyeung, B., & Baron-Cohen, S. (2012). Toward brief "red flags" for autism screening: The short autism spectrum quotient and the short quantitative checklist in 1,000 cases and 3,000 controls. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(2), 202-212.e7. https://doi.org/10.1016/j.jaac.2011.11.003

Anderson, J., Marley, C., Gillespie-Smith, K., Carter, L., & MacMahon, K. (2020). When the mask comes off: Mothers' experiences of parenting a daughter with autism spectrum condition. *Autism*, *24*(6), 1546–1556. https://doi.org/10.1177/1362361320913668

Angulo, H., Chan, M., & DeThorne, L. (2019). Life Is a Stage: Autistic Perspectives on Neurotypicality. *Autism in Adulthood: Challenges and Management*, *1*(4), 276–285. https://doi.org/10.1089/aut.2019.0024

APA. (2022). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision—DSM-5-TR™* (5th, Text Revision edition ed.). American Psychiatric Association Publishing.

Arnold, S. R. C., Uljarević, M., Hwang, Y. I., Richdale, A. L., Trollor, J. N., & Lawson, L. P. (2020). Brief Report: Psychometric Properties of the Patient Health Questionaire-9 (PHQ-9) in Autistic Adults. *Journal of Autism and Developmental Disorders*, *50*(6), 2217–2225. https://doi.org/10.1007/s10803-019-03947-9

Arnold, S. R., Higgins, J. M., Weise, J., Desai, A., Pellicano, E., & Trollor, J. N. (2023a). Confirming the nature of autistic burnout. *Autism*, *27*(7), 1906–1918. https://doi.org/10.1177/13623613221147410

Arnold, S. R., Higgins, J. M., Weise, J., Desai, A., Pellicano, E., & Trollor, J. N. (2023b). Towards the measurement of autistic burnout. *Autism*, *27*(7), 1933–1948. https://doi.org/10.1177/13623613221147401

Atherton, G., Edisbury, E., Piovesan, A., & Cross, L. (2022). Autism through the ages: A mixed methods approach to understanding how age and age of diagnosis affect quality of life. *Journal of Autism and Developmental Disorders*, *52*(8), 3639–3654. https://doi.org/10.1007/s10803-021-05235-x

Ayduk, Ö., Gyurak, A., & Luerssen, A. (2009). Rejection Sensitivity Moderates the Impact of Rejection on Self-Concept Clarity. *Personality and Social Psychology Bulletin*, *35*(11), 1467–1478. https://doi.org/10.1177/0146167209343969

Baldwin, S., & Costley, D. (2016). The experiences and needs of female adults with high-functioning autism spectrum disorder. *Autism*, *20*(4), 483–495. https://doi.org/10.1177/1362361315590805

Bargiela, S., Steward, R., & Mandy, W. (2016). The experiences of late-diagnosed women with autism spectrum conditions: An investigation of the female autism phenotype. *Journal of Autism and Developmental Disorders*, *46*(10), 3281–3294. https://doi.org/10.1007/s10803-016-2872-8

Baron-Cohen, S., Wheelwright, S., Skinner, R., Martin, J., & Clubley, E. (2001). The Autism-Spectrum Quotient (AQ): Evidence from Asperger Syndrome/High-Functioning Autism, Males and Females, Scientists and Mathematicians. *Journal of Autism and Developmental Disorders*, *31*(1), 5–17. https://doi.org/10.1023/A:1005653411471

Beck, J. S., Lundwall, R. A., Gabrielsen, T., Cox, J. C., & South, M. (2020). Looking good but feeling bad: “Camouflaging” behaviors and mental health in women with autistic traits. *Autism*, *24*(4), 809–821. https://doi.org/10.1177/1362361320912147

Belcher, H. L., Morein-Zamir, S., Mandy, W., & Ford, R. M. (2022). Camouflaging Intent, First Impressions, and Age of ASC Diagnosis in Autistic Men and Women. *Journal of Autism and Developmental Disorders*, *52*(8), 3413–3426. https://doi.org/10.1007/s10803-021-05221-3

Benjamini, Y., & Hochberg, Y. (1995). Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society: Series B (Methodological)*, *57*(1), 289–300. https://doi.org/10.1111/j.2517-6161.1995.tb02031.x

Benjamini, Y., & Yekutieli, D. (2005). False Discovery Rate–Adjusted Multiple Confidence Intervals for Selected Parameters. *Journal of the American Statistical Association*, *100*(469), 71–81. https://doi.org/10.1198/016214504000001907

Berna, F., Göritz, A. S., Schröder, J., Coutelle, R., Danion, J.-M., Cuervo-Lombard, C. V., & Moritz, S. (2016). Self-disorders in individuals with autistic traits: Contribution of reduced autobiographical reasoning capacities. *Journal of Autism and Developmental Disorders*, *46*(8), 2587–2598. https://doi.org/10.1007/s10803-016-2797-2

Bernardin, C. J., Lewis, T., Bell, D., & Kanne, S. (2021). Associations between social camouflaging and internalizing symptoms in autistic and non-autistic adolescents. *Autism: The International Journal of Research and Practice*, *25*(6), 1580–1591. https://doi.org/10.1177/1362361321997284

Bernardin, C. J., Mason, E., Lewis, T., & Kanne, S. (2021). “You Must Become a Chameleon to Survive”: Adolescent Experiences of Camouflaging. *Journal of Autism and Developmental Disorders*, *51*(12), 4422–4435. https://doi.org/10.1007/s10803-021-04912-1

Blume, H. (1998, September 30). Neurodiversity. *The Atlantic*. https://www.theatlantic.com/magazine/archive/1998/09/neurodiversity/305909/

Booth, T., Murray, A. L., McKenzie, K., Kuenssberg, R., O'Donnell, M., & Burnett, H. (2013). Brief Report: An Evaluation of the AQ-10 as a Brief Screening Instrument for ASD in Adults. *Journal of Autism and Developmental Disorders*, *43*(12), 2997–3000. https://doi.org/10.1007/s10803-013-1844-5

Boren, R. (2017, January 26). Autistic Burnout: The Cost of Masking and Passing. *Stimpunks Foundation*. https://stimpunks.org/burnout/

Botha, M., Dibb, B., & Frost, D. M. (2022). 'Autism is me': An investigation of how autistic individuals make sense of autism and stigma. *Disability & Society*, *37*(3), 427–453. https://doi.org/10.1080/09687599.2020.1822782

Botha, M., & Frost, D. M. (2020). Extending the Minority Stress Model to Understand Mental Health Problems Experienced by the Autistic Population. *Society and Mental Health*, *10*(1), 20–34. https://doi.org/10.1177/2156869318804297

Botha, M., & Gillespie-Lynch, K. (2022). Come as You Are: Examining Autistic Identity Development and the Neurodiversity Movement through an Intersectional Lens. *Human Development*, *66*(2), 93–112. https://doi.org/10.1159/000524123

Boulton, K. A., & Guastella, A. J. (2021). Social anxiety symptoms in autism spectrum disorder and social anxiety disorder: Considering the reliability of SELF-REPORT instruments in adult cohorts. *Autism Research*, *14*(11), 2383–2392. https://doi.org/10.1002/aur.2572

Bowri, M., Hull, L., Allison, C., Smith, P., Baron-Cohen, S., Lai, M.-C., & Mandy, W. (2021). Demographic and psychological predictors of alcohol use and misuse in autistic adults. *Autism*, *25*(5), 1469–1480. https://doi.org/10.1177/1362361321992668

Bradley, L., Shaw, R., Baron-Cohen, S., & Cassidy, S. (2021). Autistic adults' experiences of camouflaging and its perceived impact on mental health. *Autism in Adulthood*, *3*(4), 320–329. https://doi.org/10.1089/aut.2020.0071

Bransgrove, K., & Karakas, G. (2025). 'Being Autistic is Kind of Who You Are, It's an Identity Rather than a Disorder': Identity Negotiation and Construction Among Autistic Adults Diagnosed in Later Life. *Journal of Autism and Developmental Disorders*, 1–18. https://doi.org/10.1007/s10803-025-06865-1

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Well-Being*, *9*(1), 26152. https://doi.org/10.3402/qhw.v9.26152

Brede, J., Cage, E., Trott, J., Palmer, L., Smith, A., Serpell, L., Mandy, W., & Russell, A. (2022). 'We have to try to find a way, a clinical bridge' -autistic adults' experience of accessing and receiving support for mental health difficulties: A systematic review and thematic meta-synthesis. *Clinical Psychology Review*, *93*. https://doi.org/10.1016/j.cpr.2022.102131

Burton, L., Carss, V., & Twumasi, R. (2022). Listening to Neurodiverse Voices in the Workplace. *Ought: The Journal of Autistic Culture*, *3*(2). https://doi.org/10.9707/2833-1508.1087

Cage, E., Di Monaco, J., & Newell, V. (2018). Experiences of Autism Acceptance and Mental Health in Autistic Adults. *Journal of Autism and Developmental Disorders*, *48*(2), 473–484. https://doi.org/10.1007/s10803-017-3342-7

Cage, E., & McManemy, E. (2022). Burnt Out and Dropping Out: A Comparison of the Experiences of Autistic and Non-autistic Students During the COVID-19 Pandemic. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.792945

Cage, E., & Troxell-Whitman, Z. (2019). Understanding the reasons, contexts and costs of camouflaging for autistic adults. *Journal of Autism and*

Developmental Disorders, *49*(5), 1899–1911. https://doi.org/10.1007/s10803-018-03878-x

Campbell, J., Trapnell, P., Heine, S., Katz, I., Lavallee, L., & Lehman, D. (1996). 'Self-concept clarity: Measurement, personality correlates, and cultural boundaries': Correction. *Journal of Personality and Social Psychology*, *70*, item 10 in Table 1 contains a typographical error. https://doi.org/10.1037/0022-3514.70.6.1114

Cassidy, S. A., Bradley, L., Cogger-Ward, H., & Rodgers, J. (2021). Development and validation of the suicidal behaviours questionnaire—Autism spectrum conditions in a community sample of autistic, possibly autistic and non-autistic adults. *Molecular Autism*, *12*(1), 46. https://doi.org/10.1186/s13229-021-00449-3

Cassidy, S. A., Gould, K., Townsend, E., Pelton, M., Robertson, A. E., & Rodgers, J. (2020). Is camouflaging autistic traits associated with suicidal thoughts and behaviours? Expanding the interpersonal psychological theory of suicide in an undergraduate student sample. *Journal of Autism and Developmental Disorders*, *50*(10), 3638–3648. https://doi.org/10.1007/s10803-019-04323-3

Cassidy, S., Bradley, L., Shaw, R., & Baron-Cohen, S. (2018). Risk markers for suicidality in autistic adults. *Molecular Autism*, *9*(1), 42. https://doi.org/10.1186/s13229-018-0226-4

Cassidy, S., Bradley, P., Robinson, J., Allison, C., McHugh, M., & Baron-Cohen, S. (2014). Suicidal ideation and suicide plans or attempts in adults with Asperger's syndrome attending a specialist diagnostic clinic: A clinical cohort study. *The Lancet Psychiatry*, *1*(2), 142–147. https://doi.org/10.1016/S2215-0366(14)70248-2

Cassidy, S., McLaughlin, E., McGranaghan, R., Pelton, M., O'Connor, R., & Rodgers, J. (2023). Is camouflaging autistic traits associated with defeat, entrapment, and lifetime suicidal thoughts? Expanding the Integrated

Motivational Volitional Model of Suicide. *Suicide and Life-Threatening Behavior*, *53*(4), 572–585. https://doi.org/10.1111/sltb.12965

Chapman, L., Rose, K., Hull, L., & Mandy, W. (2022). “I want to fit in… but I don’t want to change myself fundamentally”: A qualitative exploration of the relationship between masking and mental health for autistic teenagers. *Research in Autism Spectrum Disorders*, *99*, 102069. https://doi.org/10.1016/j.rasd.2022.102069

Clarivate. (2023). *EndNote* (Version 21) [Computer software]. Clarivate. https://endnote.com/

Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, *12*(3), 297–298. https://doi.org/10.1080/17439760.2016.1262613

Cleary, M., West, S., Kornhaber, R., & Hungerford, C. (2023). Autism, Discrimination and Masking: Disrupting a Recipe for Trauma. *Issues in Mental Health Nursing*, *44*(9), 799–808. https://doi.org/10.1080/01612840.2023.2239916

Cook, A., Ogden, J., & Winstone, N. (2018). Friendship motivations, challenges and the role of masking for girls with autism in contrasting school settings. *European Journal of Special Needs Education*, *33*(3), 302–315. https://doi.org/10.1080/08856257.2017.1312797

Cook, J., Crane, L., Bourne, L., Hull, L., & Mandy, W. (2021). Camouflaging in an everyday social context: An interpersonal recall study. *Autism*, *25*(5), 1444–1456. https://doi.org/10.1177/1362361321992641

Cook, J., Crane, L., Hull, L., Bourne, L., & Mandy, W. (2022). Self-reported camouflaging behaviours used by autistic adults during everyday social interactions. *Autism*, *26*(2), 406–421. https://doi.org/10.1177/13623613211026754

Cooley, C. H. (with Cornell University Library). (1922). *Human nature and the social order*. New York, Chicago [etc.] C. Scribner's sons. http://archive.org/details/cu31924002409104

Corbett, B. A., Schwartzman, J. M., Libsack, E. J., Muscatello, R. A., Lerner, M. D., Simmons, G. L., & White, S. W. (2021). Camouflaging in Autism: Examining Sex-Based and Compensatory Models in Social Cognition and Communication. *Autism Research*, *14*(1), 127–142. https://doi.org/10.1002/aur.2440

Corden, K., Brewer, R., & Cage, E. (2021). Personal Identity After an Autism Diagnosis: Relationships With Self-Esteem, Mental Wellbeing, and Diagnostic Timing. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.699335

Coutelle, R., Goltzene, M.-A., Bizet, E., Schoenberger, M., Berna, F., & Danion, J.-M. (2020). Self-concept clarity and autobiographical memory functions in adults with autism spectrum disorder without intellectual deficiency. *Journal of Autism and Developmental Disorders*, *50*(11), 3874–3882. https://doi.org/10.1007/s10803-020-04447-x

Cox, B. E., Thompson, K., Anderson, A., Mintz, A., Locks, T., Morgan, L., Edelstein, J., & Wolz, A. (2017). College Experiences for Students With Autism Spectrum Disorder: Personal Identity, Public Disclosure, and Institutional Support. *Journal of College Student Development*, *58*(1), 71–87.

Cremone, I. M., Carpita, B., Nardi, B., Casagrande, D., Stagnari, R., Amatori, G., & Dell'Osso, L. (2023). Measuring social camouflaging in individuals with high functioning autism: A literature review. *Brain Sciences*, *13*(3), Article 3. https://doi.org/10.3390/brainsci13030469

Critical Appraisal Skills Programme. (2023). *CASP Qualitative Checklist*. https://casp-uk.net/casp-tools-checklists/qualitative-studies-checklist/

Crompton, C. J., Hallett, S., Ropar, D., Flynn, E., & Fletcher-Watson, S. (2020). 'I never realised everybody felt as happy as I do when I am around autistic people': A thematic analysis of autistic adults' relationships with autistic and neurotypical friends and family. *Autism*, *24*(6), 1438–1448. https://doi.org/10.1177/1362361320908976

Crompton, C. J., Ropar, D., Evans-Williams, C. V., Flynn, E. G., & Fletcher-Watson, S. (2020). Autistic peer-to-peer information transfer is highly effective. *Autism*, *24*(7), 1704–1712. https://doi.org/10.1177/1362361320919286

Crompton, C. J., Sharp, M., Axbey, H., Fletcher-Watson, S., Flynn, E. G., & Ropar, D. (2020). Neurotype-Matching, but Not Being Autistic, Influences Self and Observer Ratings of Interpersonal Rapport. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.586171

Davidson, J., & Henderson, V. L. (2010). 'Coming out' on the spectrum: Autism, identity and disclosure. *Social & Cultural Geography*, *11*(2), 155–170. https://doi.org/10.1080/14649360903525240

Dean, M., Harwood, R., & Kasari, C. (2017). The art of camouflage: Gender differences in the social behaviors of girls and boys with autism spectrum disorder. *Autism*, *21*(6), 678–689. https://doi.org/10.1177/1362361316671845

den Houting, J. (2019). Neurodiversity: An insider's perspective. *Autism*, *23*(2), 271–273. https://doi.org/10.1177/1362361318820762

Doyle, D. M., Begeny, C. T., Barreto, M., & Morton, T. A. (2021). Identity-Related Factors Protect Well-Being Against Stigma for Transgender and Gender Non-Conforming People. *Archives of Sexual Behavior*, *50*(7), 3191–3200. https://doi.org/10.1007/s10508-021-02029-1

Dwyer, P., Acevedo, S. M., Brown, H. M., Grapel, J., Jones, S. C., Nachman, B. R., Raymaker, D. M., & Williams, Z. J. (2021). An Expert Roundtable Discussion on Experiences of Autistic Autism Researchers. *Autism in Adulthood:*

Challenges and Management, *3*(3), 209–220. https://doi.org/10.1089/aut.2021.29019.rtb

Edwards, C., Love, A. M., Cai, R. Y., Heyworth, M., Johnston, A., Aldridge, F., & Gibbs, V. (2025). “I’m not feeling alone in my experiences”: How newly diagnosed autistic adults engage with a neurodiversity-affirming “Welcome Pack”. *Autism*, 13623613251335070. https://doi.org/10.1177/13623613251335070

Edwards, J., & Kaimal, G. (2016). Using meta-synthesis to support application of qualitative methods findings in practice: A discussion of meta-ethnography, narrative synthesis, and critical interpretive synthesis. *The Arts in Psychotherapy*, *51*, 30–35. https://doi.org/10.1016/j.aip.2016.07.003

Endow, J. (2015, July 6). ‘Autistic Burnout’ by Judy Endow, MSW. *Ollibean*. https://ollibean.org/autistic-burnout/

Evans, J. (2022). Autism Camouflaging in Relation to Views about Autism, Mental Health, and Gender Identity. *Global Tides*, *16*(1). https://digitalcommons.pepperdine.edu/globaltides/vol16/iss1/10

Evans, J. A., Krumrei-Mancuso, E. J., & Rouse, S. V. (2024). What You Are Hiding Could Be Hurting You: Autistic Masking in Relation to Mental Health, Interpersonal Trauma, Authenticity, and Self-Esteem. *Autism in Adulthood*, *6*(2), 229–240. https://doi.org/10.1089/aut.2022.0115

Evans, J. S. B. T., & Stanovich, K. E. (2013). Dual-Process Theories of Higher Cognition: Advancing the Debate. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science*, *8*(3), 223–241. https://doi.org/10.1177/1745691612460685

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Ferguson, A., Martin, D., & Pearson, A. (2024). “It Has Shown Me How Much I Am Capable Of”: An Exploration of Autistic Burnout Experiences in Motherhood. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0282

Field, S. L., Williams, M. O., Jones, C. R. G., & Fox, J. R. E. (2024). A meta-ethnography of autistic people’s experiences of social camouflaging and its relationship with mental health. *Autism*, *28*(6), 1328–1343. https://doi.org/10.1177/13623613231223036

Finn, M., Flower, R. L., Leong, H. M., & Hedley, D. (2023). ‘If I’m just me, I doubt I’d get the job’: A qualitative exploration of autistic people’s experiences in job interviews. *Autism*, *27*(7), 2086–2097. https://doi.org/10.1177/13623613231153480

Flower, R. L., Benn, R., Bury, S., Camin, M., Muggleton, J., Richardson, E. K., Bulluss, E. K., Calabria, B., Curran, A., Giugni, M., Gottliebsen, V., Hodges, H., Lawrence, J., Leung, V., Levy-Knoll, R., Miklosi, K., Mitchelson, M., Nuske, A., Waldie, C., … Jellett, R. (2025). Defining Neurodiversity Affirming Psychology Practice for Autistic Adults: A Delphi Study Integrating Psychologist and Client Perspectives. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0305

Fresco, D. M., Coles, M. E., Heimberg, R. G., Liebowitz, M. R., Hami, S., Stein, M. B., & Goetz, D. (2001). The Liebowitz Social Anxiety Scale: A comparison of the psychometric properties of self-report and clinician-administered formats. *Psychological Medicine*, *31*(6), 1025–1035. https://doi.org/10.1017/s0033291701004056

Frost, K. M., Bailey, K. M., & Ingersoll, B. R. (2019). “I just want them to see me as…me”: Identity, community, and disclosure practices among college students on the autism spectrum. *Autism in Adulthood*, *1*(4), 268–275. https://doi.org/10.1089/aut.2018.0057

Funawatari, R., Sumiya, M., Iwabuchi, T., Nishimura, T., Komeda, H., & Senju, A. (2024). Camouflaging in Autistic Adults is Modulated by Autistic and Neurotypical Characteristics of Interaction Partners. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06481-5

Funawatari, R., Sumiya, M., Iwabuchi, T., & Senju, A. (2024). Double-Edged Effects of Social Strategies on the Well-Being of Autistic People: Impact of Self-Perceived Effort and Efficacy. *Brain Sciences*, *14*(10), Article 10. https://doi.org/10.3390/brainsci14100962

Gao, S. (Stan), Brandt, S. A., & Stults, C. B. (2023). Internalized transphobia and self-concept clarity among transgender and gender-nonconforming young adults: Characteristics, associations, and the mediating role of self-esteem. *Psychology of Sexual Orientation and Gender Diversity*, No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/sgd0000691

George, R., & Stokes, M. A. (2018a). A Quantitative Analysis of Mental Health Among Sexual and Gender Minority Groups in ASD. *Journal of Autism and Developmental Disorders*, *48*(6), 2052–2063. https://doi.org/10.1007/s10803-018-3469-1

George, R., & Stokes, M. A. (2018b). Gender identity and sexual orientation in autism spectrum disorder. *Autism*, *22*(8), 970–982. https://doi.org/10.1177/1362361317714587

Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199–208. https://doi.org/10.1192/apt.bp.107.005264

Giroux, M., Courcy, I., & Nadig, A. (2024). Social camouflage in autism: An analysis of decision making. *Autism in Adulthood*. https://doi.org/10.1089/aut.2023.0077

Glackin, A., Pearson, A., & Davis, R. (2024). “You Are the Expert of Your Own Experience”: A Thematic Analysis of Experiences of Autism and Gender

Diversity in Adulthood. *Autism in Adulthood*, *6*(3), 300–311. https://doi.org/10.1089/aut.2022.0111

Goffman, E. (1963). *Stigma; Notes on the Management of Spoiled Identity*. Prentice-Hall.

Gonçalves Garcia, S., da Silveira Simões-Pires, C., Acosta Brum, J., & Centurion Cabral, J. (2025). Taking Off the Mask: Investigating Autism Diagnosis and Camouflaging in Adult Women. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0150

Green, K., Weir, E., Wright, L., Allison, C., & Baron-Cohen, S. (2025). Autistic and transgender/gender diverse people's experiences of health and healthcare. *Molecular Autism*, *16*(1), Article 1. https://doi.org/10.1186/s13229-024-00634-0

Hadland, S. E., Solomon, E. D., & Guss, C. E. (2023). Affirming Care for Autism and Gender Diversity. *Pediatrics*, *152*(2), e2023061813. https://doi.org/10.1542/peds.2023-061813

Hall, J. P., Batza, K., Streed, C. G., Boyd, B. A., & Kurth, N. K. (2020). Health Disparities Among Sexual and Gender Minorities with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *50*(8), 3071–3077. https://doi.org/10.1007/s10803-020-04399-2

Halsall, J., Clarke, C., & Crane, L. (2021). "Camouflaging" by adolescent autistic girls who attend both mainstream and specialist resource classes: Perspectives of girls, their mothers and their educators. *Autism*, *25*(7), 2074–2086. https://doi.org/10.1177/13623613211012819

Hannon, B., Mandy, W., & Hull, L. (2023). A comparison of methods for measuring camouflaging in autism. *Autism Research*, *16*(1), 12–29. https://doi.org/10.1002/aur.2850

Harmens, M., Sedgewick, F., & Hobson, H. (2022). The quest for acceptance: A blog-based study of autistic women's experiences and well-being during

autism identification and diagnosis. *Autism in Adulthood*, *4*(1), 42–51. https://doi.org/10.1089/aut.2021.0016

Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis, Second Edition: A Regression-Based Approach*. Guilford Publications.

Hayes, S. C., & Pierson, H. (2005). Acceptance and Commitment Therapy. In *Encyclopedia of Cognitive Behavior Therapy* (pp. 1–4). Springer, Boston, MA. https://doi.org/10.1007/0-306-48581-8_1

Hedley, D., & Uljarević, M. (2018). Systematic review of suicide in autism spectrum disorder: Current trends and implications. *Current Developmental Disorders Reports*, *5*(1), 65–76. https://doi.org/10.1007/s40474-018-0133-6

Heimberg, R. G., Horner, K. J., Juster, H. R., Safren, S. A., Brown, E. J., Schneier, F. R., & Liebowitz, M. R. (1999). Psychometric properties of the Liebowitz Social Anxiety Scale. *Psychological Medicine*, *29*(1), 199–212. https://doi.org/10.1017/S0033291798007879

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *The Behavioral and Brain Sciences*, *33*(2–3), 61–83; discussion 83-135. https://doi.org/10.1017/S0140525X0999152X

Hertel, A. W. (2017). Sources of Self-Concept Clarity. In J. Lodi-Smith & K. G. DeMarree (Eds.), *Self-Concept Clarity* (pp. 43–66). Springer International Publishing. https://doi.org/10.1007/978-3-319-71547-6_3

Higgins, J. M., Arnold, S. R., Weise, J., Pellicano, E., & Trollor, J. N. (2021). Defining autistic burnout through experts by lived experience: Grounded Delphi method investigating #AutisticBurnout. *Autism*, *25*(8), 2356–2369. https://doi.org/10.1177/13623613211019858

Hillier, A., Gallop, N., Mendes, E., Tellez, D., Buckingham, A., Nizami, A., & OToole, D. (2019). LGBTQ + and autism spectrum disorder: Experiences and

challenges. *International Journal of Transgender Health*, *21*(1), 98–110. https://doi.org/10.1080/15532739.2019.1594484

Hirvikoski, T., Mittendorfer-Rutz, E., Boman, M., Larsson, H., Lichtenstein, P., & Bölte, S. (2016). Premature mortality in autism spectrum disorder. *The British Journal of Psychiatry: The Journal of Mental Science*, *208*(3), 232–238. https://doi.org/10.1192/bjp.bp.114.160192

Hosozawa, M., Sacker, A., & Cable, N. (2021). Timing of diagnosis, depression and self-harm in adolescents with autism spectrum disorder. *Autism*, *25*(1), 70–78. https://doi.org/10.1177/1362361320945540

Howard, P. L., & Sedgewick, F. (2021). 'Anything but the phone!': Communication mode preferences in the autism community. *Autism*, *25*(8), 2265–2278. https://doi.org/10.1177/13623613211014995

Howe, S. J., Hull, L., Sedgewick, F., Hannon, B., & McMorris, C. A. (2023). Understanding camouflaging and identity in autistic children and adolescents using photo-elicitation. *Research in Autism Spectrum Disorders*, *108*, 102232. https://doi.org/10.1016/j.rasd.2023.102232

Hull, L., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., Petrides, K., & Mandy, W. (2020a). Gender differences in self-reported camouflaging in autistic and non-autistic adults. *Autism*, *24*(2), 352–363. https://doi.org/10.1177/1362361319864804

Hull, L., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., Petrides, K., & Mandy, W. (2020b). Gender differences in self-reported camouflaging in autistic and non-autistic adults. *Autism*, *24*(2), 352–363. https://doi.org/10.1177/1362361319864804

Hull, L., Levy, L., Lai, M.-C., Petrides, K. V., Baron-Cohen, S., Allison, C., Smith, P., & Mandy, W. (2021). Is social camouflaging associated with anxiety and depression in autistic adults? *Molecular Autism*, *12*(1), Article 1. https://doi.org/10.1186/s13229-021-00421-1

Hull, L., Mandy, W., Belcher, H., & Petrides, K. V. (2024). Validation of the camouflaging autistic traits questionnaire short form (CATQ-SF). *Comprehensive Psychiatry*, *135*, 152525. https://doi.org/10.1016/j.comppsych.2024.152525

Hull, L., Mandy, W., Lai, M.-C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the camouflaging autistic traits questionnaire (cat-q). *Journal of Autism and Developmental Disorders*, *49*(3), 819–833. https://doi.org/10.1007/s10803-018-3792-6

Hull, L., Petrides, K. V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M.-C., & Mandy, W. (2017). "Putting on My Best Normal": Social Camouflaging in Adults with Autism Spectrum Conditions. *Journal of Autism and Developmental Disorders*, *47*(8), 2519–2534. https://doi.org/10.1007/s10803-017-3166-5

IBM Corp. (2023). *IBM SPSS Statistics for Windows* (Version 29.0.2.0) [Computer software]. IBM Corp. https://www.ibm.com/spss

INVOLVE. (2014). *Guidance on the use of social media to actively involve people in research.* Eastleigh: INVOLVE.

Jadav, N., & Bal, V. H. (2022). Associations between co-occurring conditions and age of autism diagnosis: Implications for mental health training and adult autism research. *Autism Research*, *15*(11), 2112–2125. https://doi.org/10.1002/aur.2808

Jafar, A. J. N. (2018). What is positionality and should it be expressed in quantitative studies? *Emergency Medicine Journal*, *35*(5), 323–324. https://doi.org/10.1136/emermed-2017-207158

Jamieson, M. K., Govaart, G. H., & Pownall, M. (2023). Reflexivity in quantitative research: A rationale and beginner's guide. *Social and Personality Psychology Compass*, *17*(4), e12735. https://doi.org/10.1111/spc3.12735

Jedrzejewska, A., & Dewey, J. (2022). Camouflaging in Autistic and Non-autistic Adolescents in the Modern Context of Social Media. *Journal of Autism and*

Developmental Disorders, *52*(2), 630–646. https://doi.org/10.1007/s10803-021-04953-6

Jones, S. C. (2021). Let's Talk About Autistic Autism Researchers. *Autism in Adulthood: Challenges and Management*, *3*(3), 206–208. https://doi.org/10.1089/aut.2021.29012.scj

Kamio, Y., Inada, N., & Koyama, T. (2012). A nationwide survey on quality of life and associated factors of adults with high-functioning autism spectrum disorders. *Autism : The International Journal of Research and Practice*, *17*. https://doi.org/10.1177/1362361312436848

Kapp, S. K., Gillespie-Lynch, K., Sherman, L. E., & Hutman, T. (2013). Deficit, difference, or both? Autism and neurodiversity. *Developmental Psychology*, *49*(1), 59–71. https://doi.org/10.1037/a0028353

Keating, C. T., Hickman, L., Geelhand, P., Takahashi, T., Leung, J., Monk, R., Schuster, B., Rybicki, A., Girolamo, T. M., Clin, E., Papastamou, F., Belenger, M., Eigsti, I.-M., Cook, J. L., Kosaka, H., Osu, R., Okamoto, Y., & Sowden-Carvalho, S. (2024). Cross-cultural variation in experiences of acceptance, camouflaging and mental health difficulties in autism: A registered report. *PLOS ONE*, *19*(3), e0299824. https://doi.org/10.1371/journal.pone.0299824

Khalifa, G., Sharif, Z., Sultan, M., & Di Rezze, B. (2020). Workplace accommodations for adults with autism spectrum disorder: A scoping review. *Disability and Rehabilitation*, *42*(9), 1316–1331. https://doi.org/10.1080/09638288.2018.1527952

Khan, M. H., Grabarski, M. K., Ali, M., & Buckmaster, S. (2023). Insights into Creating and Managing an Inclusive Neurodiverse Workplace for Positive Outcomes: A Multistaged Theoretical Framework. *Group & Organization Management*, *48*(5), 1339–1386. https://doi.org/10.1177/10596011221133583

Khudiakova, V., Russell, E., Sowden-Carvalho, S., & Surtees, A. D. R. (2024). A systematic review and meta-analysis of mental health outcomes associated with camouflaging in autistic people. *Research in Autism Spectrum Disorders*, *118*, 102492. https://doi.org/10.1016/j.rasd.2024.102492

Kidwell, K. E., Clancy, R. L., & Fisher, G. G. (2023). The devil you know versus the devil you don't: Disclosure versus masking in the workplace. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, *16*(1), 55–60. https://doi.org/10.1017/iop.2022.101

Klein, J., Krahn, R., Howe, S., Lewis, J., McMorris, C., & Macoun, S. (2024). A systematic review of social camouflaging in autistic adults and youth: Implications and theory. *Development and Psychopathology*, 1–15. https://doi.org/10.1017/S0954579424001159

Klein, J., & Macoun, S. J. (2025). Person-environment fit and social camouflaging in autism. *New Ideas in Psychology*, *76*, 101112. https://doi.org/10.1016/j.newideapsych.2024.101112

Knott, F., & Taylor, A. (2014). Life at university with Asperger syndrome: A comparison of student and staff perspectives. *International Journal of Inclusive Education*, *18*(4), 411–426. https://doi.org/10.1080/13603116.2013.781236

Kong, H., Xie, J., Dou, F., Li, X., Wang, X., & Huang, Y. (2024). *Autistic traits and depressive symptoms in the general population: Mediating roles of social camouflaging, self-concept clarity, and self-disgus*. PsyArXiv. https://doi.org/10.31234/osf.io/drjz9

Kopala-Sibley, D. C., & Zuroff, D. C. (2020). The self and depression: Four psychological theories and their potential neural correlates. *Journal of Personality*, *88*(1), 14–30. https://doi.org/10.1111/jopy.12456

Krahn, T. M., & Fenton, A. (2012). The extreme male brain theory of autism and the potential adverse effects for boys and girls with autism. *Journal of Bioethical Inquiry*, *9*(1), 93–103. https://doi.org/10.1007/s11673-011-9350-y

Kroenke, K., Wu, J., Yu, Z., Bair, M. J., Kean, J., Stump, T., & Monahan, P. O. (2016). The patient health questionnaire anxiety and depression scale (phq-ads): Initial validation in three clinical trials. *Psychosomatic Medicine*, *78*(6), 716–727. https://doi.org/10.1097/PSY.0000000000000322

Krupa, L. M. (2018). *The Impact of Self-concept Clarity on the Development of Social Anxiety* [M.S., California State University, Fullerton]. https://www.proquest.com/docview/2102482248/abstract/9A8442245D7B4819PQ/1

Kuper, L. E., Wright, L., & Mustanski, B. (2018). Gender identity development among transgender and gender nonconforming emerging adults: An intersectional approach. *International Journal of Transgenderism*, *19*(4), 436–455. https://doi.org/10.1080/15532739.2018.1443869

Lai, M.-C., Kassee, C., Besney, R., Bonato, S., Hull, L., Mandy, W., Szatmari, P., & Ameis, S. H. (2019). Prevalence of co-occurring mental health diagnoses in the autism population: A systematic review and meta-analysis. *The Lancet Psychiatry*, *6*(10), 819–829. https://doi.org/10.1016/S2215-0366(19)30289-5

Lai, M.-C., Lombardo, M. V., & Baron-Cohen, S. (2014). Autism. *The Lancet*, *383*(9920), 896–910. https://doi.org/10.1016/S0140-6736(13)61539-1

Lai, M.-C., Lombardo, M. V., Ruigrok, A. N., Chakrabarti, B., Auyeung, B., Szatmari, P., Happé, F., & Baron-Cohen, S. (2017). Quantifying and exploring camouflaging in men and women with autism. *Autism*, *21*(6), 690–702. https://doi.org/10.1177/1362361316671012

Lawson, W. B. (2020). Adaptive Morphing and Coping with Social Threat in Autism: An Autistic Perspective. *Journal of Intellectual Disability - Diagnosis and Treatment*, *8*(3), Article 3. https://doi.org/10.6000/2292-2598.2020.08.03.29

Leedham, A., Thompson, A. R., Smith, R., & Freeth, M. (2020). 'I was exhausted trying to figure it out': The experiences of females receiving an autism diagnosis in middle to late adulthood. *Autism*, *24*(1), 135–146. https://doi.org/10.1177/1362361319853442

Lei, J., Cooper, K., & Hollocks, M. J. (2024). Psychological Interventions for Autistic Adolescents with Co-Occurring Anxiety and Depression: Considerations Linked to Autism Social Identity and Masking. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0005

Lei, J., Leigh, E., Charman, T., Russell, A., & Hollocks, M. J. (2024). Understanding the relationship between social camouflaging in autism and safety behaviours in social anxiety in autistic and non-autistic adolescents. *Journal of Child Psychology and Psychiatry*, *65*(3), 285–297. https://doi.org/10.1111/jcpp.13884

Lei, J., & Nocon, A. S. (2024). Are we Missing Character in Strengths-Based Approaches to Coaching and Therapy for Autistic People? *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0227

Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., Bohren, M. A., Tunçalp, Ö., Colvin, C. J., Garside, R., Carlsen, B., Langlois, E. V., & Noyes, J. (2018). Applying GRADE-CERQual to qualitative evidence synthesis findings: Introduction to the series. *Implementation Science*, *13*(1), 2. https://doi.org/10.1186/s13012-017-0688-3

Lewis, L. F. (2017). A mixed methods study of barriers to formal diagnosis of autism spectrum disorder in adults. *Journal of Autism and Developmental Disorders*, *47*(8), 2410–2424. https://doi.org/10.1007/s10803-017-3168-3

Libsack, E. J., Keenan, E. G., Freden, C. E., Mirmina, J., Iskhakov, N., Krishnathasan, D., & Lerner, M. D. (2021). A Systematic Review of Passing as Non-autistic in Autism Spectrum Disorder. *Clinical Child and Family*

Psychology Review, *24*(4), 783–812. https://doi.org/10.1007/s10567-021-00365-1

Liebowitz, M. R. (1987). *Liebowitz Social Anxiety Scale*. https://doi.org/10.1037/t07671-000

Lilley, R., Lawson, W., Hall, G., Mahony, J., Clapham, H., Heyworth, M., Arnold, S. R., Trollor, J. N., Yudell, M., & Pellicano, E. (2022). 'A way to be me': Autobiographical reflections of autistic adults diagnosed in mid-to-late adulthood. *Autism*, *26*(6), 1395–1408. https://doi.org/10.1177/13623613211050694

Lindsay, S., Osten, V., Rezai, M., & Bui, S. (2021). Disclosure and workplace accommodations for people with autism: A systematic review. *Disability and Rehabilitation*, *43*(5), 597–610. https://doi.org/10.1080/09638288.2019.1635658

Lipinski, S., Boegl, K., Blanke, E. S., Suenkel, U., & Dziobek, I. (2022). A blind spot in mental healthcare? Psychotherapists lack education and expertise for the support of adults on the autism spectrum. *Autism*, *26*(6), 1509–1521. https://doi.org/10.1177/13623613211057973

Livingston, L. A., Shah, P., & Happé, F. (2019). Compensatory strategies below the behavioural surface in autism: A qualitative study. *The Lancet Psychiatry*, *6*(9), 766–777. https://doi.org/10.1016/S2215-0366(19)30224-X

Livingston, L. A., Shah, P., Milner, V., & Happé, F. (2020). Quantifying compensatory strategies in adults with and without diagnosed autism. *Molecular Autism*, *11*(1), 15. https://doi.org/10.1186/s13229-019-0308-y

Loomes, R., Hull, L., & Mandy, W. P. L. (2017). What is the male-to-female ratio in autism spectrum disorder? A systematic review and meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry*, *56*(6), 466–474. https://doi.org/10.1016/j.jaac.2017.03.013

Lumivero. (2024). *NVivo* (Version 14) [Computer software]. https://lumivero.com/products/nvivo/

Lupindo, B. M., Maw, A., & Shabalala, N. (2023). Late diagnosis of autism: Exploring experiences of males diagnosed with autism in adulthood. *Current Psychology*, *42*(28), 24181–24197. https://doi.org/10.1007/s12144-022-03514-z

Maddox, B. B., Crabbe, S., Beidas, R. S., Brookman-Frazee, L., Cannuscio, C. C., Miller, J. S., Nicolaidis, C., & Mandell, D. S. (2020). “I wouldn’t know where to start”: Perspectives from clinicians, agency leaders, and autistic adults on improving community mental health services for autistic adults. *Autism*, *24*(4), 919–930. https://doi.org/10.1177/1362361319882227

Mandy, W. (2019). Social camouflaging in autism: Is it time to lose the mask? *Autism*, *23*(8), 1879–1881. https://doi.org/10.1177/1362361319878559

Mantzalas, J., Richdale, A. L., Adikari, A., Lowe, J., & Dissanayake, C. (2022). What is autistic burnout? A thematic analysis of posts on two online platforms. *Autism in Adulthood: Challenges and Management*, *4*(1), 52–65. https://doi.org/10.1089/aut.2021.0021

Mantzalas, J., Richdale, A. L., & Dissanayake, C. (2022). A conceptual model of risk and protective factors for autistic burnout. *Autism Research*, *15*(6), 976–987. https://doi.org/10.1002/aur.2722

Mantzalas, J., Richdale, A. L., Li, X., & Dissanayake, C. (2024). Measuring and validating autistic burnout. *Autism Research*, *17*(7), 1417–1449. https://doi.org/10.1002/aur.3129

Marocchini, E., & Baldin, I. (2024). Cross-neurotype communication from an autistic point of view: Insights on autistic Theory of Mind from a focus group study. *International Journal of Language & Communication Disorders*, *59*(6), 2465–2482. https://doi.org/10.1111/1460-6984.13095

Maroney, M., & Horne, S. (2022). “Tuned Into a Different Channel”: Autistic Transgender Adults’ Experiences of Intersectional Stigma. *Journal of Counseling Psychology*, *69*. https://doi.org/10.1037/cou0000639

Mason, H. (2024). *Autistic burnout: Exploring autistic perspectives on treatment availability and effectiveness*. https://dc.arcabc.ca/islandora/object/dc:59726

McKinnon, K., Bougoure, M., Zhuang, S., Tan, D. W., & Magiati, I. (2024). Exploring the construct validity of the Camouflaging Autistic Traits Questionnaire: A factor analytic study. *Autism*, 13623613241287964. https://doi.org/10.1177/13623613241287964

McQuaid, G. A., Lee, N. R., & Wallace, G. L. (2022). Camouflaging in autism spectrum disorder: Examining the roles of sex, gender identity, and diagnostic timing. *Autism*, *26*(2), 552–559. https://doi.org/10.1177/13623613211042131

Meyer, I. H. (2003). Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Miller, D., Rees, J., & Pearson, A. (2021). “Masking Is Life”: Experiences of Masking in Autistic and Nonautistic Adults. *Autism in Adulthood: Challenges and Management*, *3*(4), 330–338. https://doi.org/10.1089/aut.2020.0083

Miller, R. A., Nachman, B. R., & Wynn, R. D. (2020a). ‘I Feel Like They are all Interconnected’: Understanding the Identity Management Narratives of Autistic LGBTQ College Students. *College Student Affairs Journal*, *38*(1), 1–15.

Miller, R. A., Nachman, B. R., & Wynn, R. D. (2020b). ‘I Feel Like They are all Interconnected’: Understanding the Identity Management Narratives of Autistic LGBTQ College Students. *College Student Affairs Journal*, *38*(1), 1–15.

Miller, R. A., Nachman, B. R., & Wynn, R. D. (2020c). 'I Feel Like They are all Interconnected': Understanding the Identity Management Narratives of Autistic LGBTQ College Students. *College Student Affairs Journal*, *38*(1), 1–15. https://doi.org/10.1353/csj.2020.0000

Milner, V., Colvert, E., Hull, L., Cook, J., Ali, D., Mandy, W., & Happé, F. (2023). Does camouflaging predict age at autism diagnosis? A comparison of autistic men and women. *Autism Research*, *17*(3), 626–636. https://doi.org/10.1002/aur.3059

Milner, V., Colvert, E., Mandy, W., & Happé, F. (2022). A comparison of self-report and discrepancy measures of camouflaging: Exploring sex differences in diagnosed autistic versus high autistic trait young adults. *Autism Research*, *16*(3), 580–590. https://doi.org/10.1002/aur.2873

Milner, V., Mandy, W., Happé, F., & Colvert, E. (2023). Sex differences in predictors and outcomes of camouflaging: Comparing diagnosed autistic, high autistic trait and low autistic trait young adults. *Autism*, *27*(2), 402–414. https://doi.org/10.1177/13623613221098240

Milton, D. E. M. (2012). On the ontological status of autism: The 'double empathy problem'. *Disability & Society*, *27*(6), 883–887. https://doi.org/10.1080/09687599.2012.710008

Miserandino, C. (2013, April 25). The Spoon Theory written by Christine Miserandino. *But You Dont Look Sick? Support for Those with Invisible Illness or Chronic Illness*. https://butyoudontlooksick.com/articles/written-by-christine/the-spoon-theory/

Mittertreiner, E. J., Ng-Cordell, E., McVey, A. J., & Kerns, C. M. (2024). Research methods at the intersection of gender diversity and autism: A scoping review. *Autism*, *28*(12), 2953–2969. https://doi.org/10.1177/13623613241245595

Moore, H. L., Cassidy, S., & Rodgers, J. (2024). Exploring the mediating effect of camouflaging and the moderating effect of autistic identity on the relationship

between autistic traits and mental wellbeing. *Autism Research*, *17*(7), 1391–1406. https://doi.org/10.1002/aur.3073

Murray, D., Lesser, M., & Lawson, W. (2005). Attention, monotropism and the diagnostic criteria for autism. *Autism*, *9*(2), 139–156. https://doi.org/10.1177/1362361305051398

Narzisi, A. (2023). To Be or Not to Be Autistic: From the Camouflage Effect to Élan Vital – A Gestalt Perspective. In *Psychopathology of the Situation in Gestalt Therapy*. Routledge.

Nelson, T. (2024). *"Before people see the autism, they see my race": An intersectional exploration of the lived experiences of masking and camouflaging Black Autistic girls in UK education using IPA and DisCrit* [Other, University of Essex & Tavistock and Portman NHS Foundation Trust]. https://repository.essex.ac.uk/39207/

Neville, F., Sedgewick, F., McClean, S., White, J., & Bray, I. (2024). Reacting, Retreating, Regulating, and Reconnecting: How Autistic Adults in the United Kingdom Use Time Alone for Well-Being. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0148

Noyes, J., Booth, A., Flemming, K., Garside, R., Harden, A., Lewin, S., Pantoja, T., Hannes, K., Cargo, M., & Thomas, J. (2018). Cochrane Qualitative and Implementation Methods Group guidance series—paper 3: Methods for assessing methodological limitations, data extraction and synthesis, and confidence in synthesized qualitative findings. *Journal of Clinical Epidemiology*, *97*, 49–58. https://doi.org/10.1016/j.jclinepi.2017.06.020

Oakman, J., Van Ameringen, M., Mancini, C., & Farvolden, P. (2003). A confirmatory factor analysis of a self-report version of the Liebowitz Social Anxiety Scale. *Journal of Clinical Psychology*, *59*(1), 149–161. https://doi.org/10.1002/jclp.10124

Oates, J., Carpenter, D., Fisher, M., Goodson, S., Hannah, B., Kwiatkowski, R., Prutton, K., Reeves, D., & Wainwright, T. (2021). *BPS Code of Human Research Ethics* (p. bpsrep.2021.inf180). British Psychological Society. https://doi.org/10.53841/bpsrep.2021.inf180

O'Nions, E., Petersen, I., Buckman, J. E. J., Charlton, R., Cooper, C., Corbett, A., Happé, F., Manthorpe, J., Richards, M., Saunders, R., Zanker, C., Mandy, W., & Stott, J. (2023). Autism in England: Assessing underdiagnosis in a population-based cohort study of prospectively collected primary care data. *The Lancet Regional Health – Europe*, *29*. https://doi.org/10.1016/j.lanepe.2023.100626

Oredipe, T., Kofner, B., Riccio, A., Cage, E., Vincent, J., Kapp, S. K., Dwyer, P., & Gillespie-Lynch, K. (2023). Does learning you are autistic at a younger age lead to better adult outcomes? A participatory exploration of the perspectives of autistic university students. *Autism*, *27*(1), 200–212. https://doi.org/10.1177/13623613221086700

Orr, E. M. J., & Moscovitch, D. A. (2015). Blending in at the Cost of Losing Oneself: Dishonest Self-Disclosure Erodes Self-Concept Clarity in Social Anxiety. *Journal of Experimental Psychopathology*, *6*(3), 278–296. https://doi.org/10.5127/jep.044914

Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The suicidal behaviors questionnaire-revised (sbq-r):validation with clinical and nonclinical samples. *Assessment*, *8*(4), 443–454. https://doi.org/10.1177/107319110100800409

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan—A web and mobile app for systematic reviews. *Systematic Reviews*, *5*(1), 210. https://doi.org/10.1186/s13643-016-0384-4

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R.,

Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, n71. https://doi.org/10.1136/bmj.n71

Peachey, M., & Crane, L. (2024). "I Don't Understand Their Sense of Belonging": Exploring How Nonbinary Autistic Adults Experience Gender. *Autism in Adulthood*, *6*(4), 462–473. https://doi.org/10.1089/aut.2023.0071

Pearson, A., & Rose, K. (2021). A Conceptual Analysis of Autistic Masking: Understanding the Narrative of Stigma and the Illusion of Choice. *Autism in Adulthood: Challenges and Management*, *3*(1), 52–60. https://doi.org/10.1089/aut.2020.0043

Pearson, A., Rose, K., & Rees, J. (2023). 'I felt like I deserved it because I was autistic': Understanding the impact of interpersonal victimisation in the lives of autistic people. *Autism*, *27*(2), 500–511. https://doi.org/10.1177/13623613221104546

Perich, E. (2024). *Hall of Mirrors: Examining the Impact of Masking on the Concept of Self and Relationships of Adult-Diagnosed Autistic Women and Individuals from a Gender Minority Through Cooley's Looking Glass* [Queensland University of Technology]. https://doi.org/10.5204/thesis.eprints.254565

Perry, E., Mandy, W., Hull, L., & Cage, E. (2022). Understanding camouflaging as a response to autism-related stigma: A social identity theory approach. *Journal of Autism and Developmental Disorders*, *52*(2), 800–810. https://doi.org/10.1007/s10803-021-04987-w

Phung, J., Penner, M., Pirlot, C., & Welch, C. (2021). What I Wish You Knew: Insights on Burnout, Inertia, Meltdown, and Shutdown From Autistic Youth. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.741421

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis*

in systematic reviews: A product from the ESRC Methods Programme. https://doi.org/10.13140/2.1.1018.4643

Pritchard-Rowe, E., de Lemos, C., Howard, K., & Gibson, J. (2024). Diversity in Autistic Play: Autistic Adults' Experiences. *Autism in Adulthood*, *6*(2), 218–228. https://doi.org/10.1089/aut.2023.0008

Pryke-Hobbes, A., Davies, J., Heasman, B., Livesey, A., Walker, A., Pellicano, E., & Remington, A. (2023). The workplace masking experiences of autistic, non-autistic neurodivergent and neurotypical adults in the UK. *PLOS ONE*, *18*(9), e0290001. https://doi.org/10.1371/journal.pone.0290001

Pyszkowska, A. (2024). It is More Anxiousness than Role-playing: Social Camouflaging Conceptualization Among Adults on the Autism Spectrum Compared to Persons with Social Anxiety Disorder. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06416-0

Radulski, E. M. (2022). Conceptualising autistic masking, camouflaging, and neurotypical privilege: Towards a minority group model of neurodiversity. *Human Development*, *66*(2), 113–127. https://doi.org/10.1159/000524122

Rauthmann, J. F. (2021). Chapter 18 - Capturing interactions, correlations, fits, and transactions: A Person-Environment Relations Model. In J. F. Rauthmann (Ed.), *The Handbook of Personality Dynamics and Processes* (pp. 427–522). Academic Press. https://doi.org/10.1016/B978-0-12-813995-0.00018-2

Raymaker, D. M., Teo, A. R., Steckler, N. A., Lentz, B., Scharer, M., Delos Santos, A., Kapp, S. K., Hunter, M., Joyce, A., & Nicolaidis, C. (2020). "Having all of your internal resources exhausted beyond measure and being left with no clean-up crew": Defining autistic burnout. *Autism in Adulthood*, *2*(2), 132–143. https://doi.org/10.1089/aut.2019.0079

Remnélius, K. L., Neufeld, J., Isaksson, J., & Bölte, S. (2024). Does camouflaging cause reduced quality of life? A co-twin control study. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06583-0

Rios Morrison, K., & Wheeler, S. C. (2010). Nonconformity Defines the Self: The Role of Minority Opinion Status in Self-Concept Clarity. *Personality and Social Psychology Bulletin*, *36*(3), 297–308. https://doi.org/10.1177/0146167209358075

Robeson, M., Brasil, K. M., Adams, H. C., & Zlomke, K. R. (2024). Measuring depression and anxiety in autistic college students: A psychometric evaluation of the PHQ-9 and GAD-7. *Autism*, *28*(11), 2793–2805. https://doi.org/10.1177/13623613241240183

Rødgaard, E.-M., Jensen, K., Miskowiak, K. W., & Mottron, L. (2022). Representativeness of autistic samples in studies recruiting through social media. *Autism Research*, *15*(8), 1447–1456. https://doi.org/10.1002/aur.2777

Rodgers, J. D., Lodi-Smith, J., Hill, P. L., Spain, S. M., Lopata, C., & Thomeer, M. L. (2018). Brief report: Personality mediates the relationship between autism quotient and well-being: a conceptual replication using self-report. *Journal of Autism and Developmental Disorders*, *48*(1), 307–315. https://doi.org/10.1007/s10803-017-3290-2

Rood, B. A., Reisner, S. L., Surace, F. I., Puckett, J. A., Maroney, M. R., & Pantalone, D. W. (2016). Expecting Rejection: Understanding the Minority Stress Experiences of Transgender and Gender-Nonconforming Individuals. *Transgender Health*, *1*(1), 151–164. https://doi.org/10.1089/trgh.2016.0012

Rose, K. (2018, May 21). Autistic Burnout—How to Recognise and Understand it. *The Autistic Advocate: Autistic People Have a Voice*. https://theautisticadvocate.com/an-autistic-burnout/

Rosqvist, H. B., Botha, M., Hens, K., O'Donoghue, S., Pearson, A., & Stenning, A. (2023). Being, Knowing, and Doing: Importing Theoretical Toolboxes for Autism Studies. *Autism in Adulthood*, *5*(1), 15–23. https://doi.org/10.1089/aut.2022.0021

Ross, A., Grove, R., & McAloon, J. (2023). The relationship between camouflaging and mental health in autistic children and adolescents. *Autism Research*, *16*(1), 190–199. https://doi.org/10.1002/aur.2859

Russell, G., Stapley, S., Newlove-Delgado, T., Salmon, A., White, R., Warren, F., Pearson, A., & Ford, T. (2022). Time trends in autism diagnosis over 20 years: A UK population-based cohort study. *Journal of Child Psychology and Psychiatry*, *63*(6), 674–682. https://doi.org/10.1111/jcpp.13505

Safren, S. A., Heimberg, R. G., Horner, K. J., Juster, H. R., Schneier, F. R., & Liebowitz, M. R. (1999). Factor Structure of Social Fears: The Liebowitz Social Anxiety Scale. *Journal of Anxiety Disorders*, *13*(3), 253–270. https://doi.org/10.1016/S0887-6185(99)00003-1

Schneid, I., & Raz, A. E. (2020). The mask of autism: Social camouflaging and impression management as coping/normalization from the perspectives of autistic adults. *Social Science & Medicine*, *248*, 112826. https://doi.org/10.1016/j.socscimed.2020.112826

Schoondermark, F., Spek, A., & Kiep, M. (2024). Evaluating an Autistic Burnout Measurement in Women. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-024-06438-8

Seers, K., & Hogg, R. (2023). “Fake it ‘till you make it”: Authenticity and wellbeing in late diagnosed autistic women. *Feminism & Psychology*, *33*(1), 23–41. https://doi.org/10.1177/09593535221101455

Shefcyk, A. (2015). Count us in: Addressing gender disparities in autism research. *Autism*, *19*(2), 131–132. https://doi.org/10.1177/1362361314566585

Simcoe, S. M., Gilmour, J., Garnett, M. S., Attwood, T., Donovan, C., & Kelly, A. B. (2023). Are there gender-based variations in the presentation of Autism amongst female and male children? *Journal of Autism and Developmental Disorders*, *53*(9), 3627–3635. https://doi.org/10.1007/s10803-022-05552-9

Singer, J. (1998). *Odd people in: The birth of community amongst people on the autistic spectrum: A personal exploration of a new social movement based on neurological diversity.* Faculty of Humanities and Social Science, University of Technology, Sydney.

Soto, E. F., Orantes, D., Russo, N., & Antshel, K. M. (2024). Autism and sexual and gender minority identity in college students: Examination of self-reported rates, functional outcomes, and treatment engagement. *Autism*, *28*(6), 1519–1539. https://doi.org/10.1177/13623613241236228

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Stagg, S. D., & Belcher, H. (2019). Living with autism without knowing: Receiving a diagnosis in later life. *Health Psychology and Behavioral Medicine*, *7*(1), 348–361. https://doi.org/10.1080/21642850.2019.1684920

Stanich, A. (2024). All the World's a (Neurotypical) Stage: Neurodivergent Folklore, Autistic Masking, and Virtual Spaces for Discussing Autistic Identity. *Journal of American Folklore*, *137*(545), 293–308.

Stoet, G. (2010). PsyToolkit: A software package for programming psychological experiments using Linux. *Behavior Research Methods*, *42*(4), 1096–1104. https://doi.org/10.3758/BRM.42.4.1096

Stoet, G. (2017). PsyToolkit: A Novel Web-Based Method for Running Online Questionnaires and Reaction-Time Experiments. *Teaching of Psychology*, *44*(1), 24–31. https://doi.org/10.1177/0098628316677643

Stopa, L., Brown, M. A., Luke, M. A., & Hirsch, C. R. (2010). Constructing a self: The role of self-structure and self-certainty in social anxiety. *Behaviour Research and Therapy*, *48*(10), 955–965. https://doi.org/10.1016/j.brat.2010.05.028

Sullivan, J. (2023). ‘Pioneers of professional frontiers’: The experiences of autistic students and professional work based learning. *Disability & Society*, *38*(7), 1209–1230. https://doi.org/10.1080/09687599.2021.1983414

Tierney, S., Burns, J., & Kilbey, E. (2016). Looking behind the mask: Social coping strategies of girls on the autistic spectrum. *Research in Autism Spectrum Disorders*, *23*, 73–83. https://doi.org/10.1016/j.rasd.2015.11.013

Tint, A., & Weiss, J. A. (2018). A qualitative study of the service experiences of women with autism spectrum disorder. *Autism*, *22*(8), 928–937. https://doi.org/10.1177/1362361317702561

To, M., Zhang, Q., Bradlyn, A., Getahun, D., Giammattei, S., Nash, R., Owen-Smith, A. A., Roblin, D., Silverberg, M. J., Tangpricha, V., Vupputuri, S., & Goodman, M. (2020). Visual Conformity with Affirmed Gender or “Passing”: Its Distribution and Association with Depression and Anxiety in a Cohort of Transgender People. *The Journal of Sexual Medicine*, *17*(10), 2084–2092. https://doi.org/10.1016/j.jsxm.2020.07.019

Tomczak, M. T., & Kulikowski, K. (2024). Toward an understanding of occupational burnout among employees with autism – the Job Demands-Resources theory perspective. *Current Psychology*, *43*(2), 1582–1594. https://doi.org/10.1007/s12144-023-04428-0

Treadgold, R. (1999). Transcendent Vocations: Their Relationship to Stress, Depression, and Clarity of Self-Concept. *Journal of Humanistic Psychology*, *39*(1), 81–105. https://doi.org/10.1177/0022167899391010

Turnock, A., Langley, K., & Jones, C. R. G. (2022). Understanding Stigma in Autism: A Narrative Review and Theoretical Model. *Autism in Adulthood: Challenges and Management*, *4*(1), 76–91. https://doi.org/10.1089/aut.2021.0005

van der Putten, W. J. (2024). *Camouflaging in autistic adults: From measurement to mental health care*. https://dare.uva.nl/search?identifier=0dab2f8f-d0fd-4e67-a52a-6645f073449f

van der Putten, W. J., Mol, A. J., Radhoe, T. A., Torenvliet, C., Agelink van Rentergem, J. A., Groenman, A. P., & Geurts, H. M. (2024). The relationship between camouflaging and mental health: Are there differences among subgroups in autistic adults? *Autism*, *28*(4), 908–919. https://doi.org/10.1177/13623613231185402

Wainwright, M., Zahroh, R. I., Tunçalp, Ö., Booth, A., Bohren, M. A., Noyes, J., Cheng, W., Munthe-Kaas, H., & Lewin, S. (2023). The use of GRADE-CERQual in qualitative evidence synthesis: An evaluation of fidelity and reporting. *Health Research Policy and Systems*, *21*(1), Article 1. https://doi.org/10.1186/s12961-023-00999-3

Walsh, M. J. M., Pagni, B., Monahan, L., Delaney, S., Smith, C. J., Baxter, L., & Braden, B. B. (2022). Sex-related brain connectivity correlates of compensation in adults with autism: Insights into female protection. *Cerebral Cortex*, *33*(2), 316–329. https://doi.org/10.1093/cercor/bhac069

Warrier, V., Greenberg, D. M., Weir, E., Buckingham, C., Smith, P., Lai, M.-C., Allison, C., & Baron-Cohen, S. (2020). Elevated rates of autism, other neurodevelopmental and psychiatric diagnoses, and autistic traits in transgender and gender-diverse individuals. *Nature Communications*, *11*(1), 3959. https://doi.org/10.1038/s41467-020-17794-1

Weber, E., Hopwood, C. J., Nissen, A. T., & Bleidorn, W. (2023). Disentangling self-concept clarity and self-esteem in young adults. *Journal of Personality and Social Psychology*, *125*(6), 1420–1441. https://doi.org/10.1037/pspp0000460

Welch, C., Cameron, D., Fitch, M., & Polatajko, H. (2021). Living in autistic bodies: Bloggers discuss movement control and arousal regulation. *Disability and Rehabilitation*, *43*(22), 3159–3167. https://doi.org/10.1080/09638288.2020.1729872

White, L. C. J., Ixqe, K. V., Goodall, K., & Gillespie-Smith, K. (2024). Minority Stress, Camouflaging, and Mental Health Outcomes in Transgender and/or Non-

binary Autistic Adults. *Autism in Adulthood*. https://doi.org/10.1089/aut.2023.0151

Wong, A. E., Dirghangi, S. R., & Hart, S. R. (2019). Self-concept clarity mediates the effects of adverse childhood experiences on adult suicide behavior, depression, loneliness, perceived stress, and life distress. *Self and Identity*, *18*(3), 247–266. https://doi.org/10.1080/15298868.2018.1439096

Wood, R., & Happé, F. (2021). What are the views and experiences of autistic teachers? Findings from an online survey in the UK. *Disability and Society*, *38*(1), Article 1.

Wood-Downie, H., Wong, B., Kovshoff, H., Mandy, W., Hull, L., & Hadwin, J. A. (2021). Sex/gender differences in camouflaging in children and adolescents with autism. *Journal of Autism and Developmental Disorders*, *51*(4), 1353–1364. https://doi.org/10.1007/s10803-020-04615-z

Wylie, P. (2014). *Very late diagnosis of asperger syndrome (autism spectrum disorder): How seeking a diagnosis in adulthood can change your life*. Jessica Kingsley Publishers.

Zener, D. (2019a). Helping autistic women thrive. *Advances in Autism*, *5*(3), 143–156. https://doi.org/10.1108/AIA-10-2018-0042

Zener, D. (2019b). Journey to diagnosis for women with autism. *Advances in Autism*, *5*(1), 2–13. https://doi.org/10.1108/AIA-10-2018-0041

Zhuang, S., Tan, D. W., Reddrop, S., Dean, L., Maybery, M., & Magiati, I. (2023). Psychosocial factors associated with camouflaging in autistic people and its relationship with mental health and well-being: A mixed methods systematic review. *Clinical Psychology Review*, *105*, 102335. https://doi.org/10.1016/j.cpr.2023.102335

Appendices

Appendix A

Research in Autism Journal Author Guidelines

ScienceDirect

About the journal

Aims and scope

Research in Autism (REIA) publishes high quality empirical articles and reviews that contribute to a better understanding of Autism Spectrum Disorders (ASD) at all levels of description; genetic, neurobiological, cognitive, and behavioral. The primary focus of the journal is to bridge the gap between basic research at these levels, and the practical questions and difficulties that are faced by autistic individuals and their families, as well as carers, educators and clinicians. In addition, the journal encourages submissions on topics that remain under-researched in the field. We know shamefully little about the causes and consequences of the significant language and general intellectual impairments that are very common among the autism community. We know even less about the challenges that autistic women face and less still about the needs of autistic individuals as they grow older. Medical and psychological co-morbidities and the complications they bring with them for the diagnosis and treatment of ASD represents another area of relatively little research. At REIA we are committed to promoting high-quality and rigorous research on all of these issues, and we look forward to receiving many excellent submissions.

Benefits to authors
We also provide many author benefits, such as free PDFs, a liberal copyright

policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our Support Center

Article types

Research in Autism publishes the following types of manuscripts:

Brief reports

Papers of no more than 2,500 words that report an original piece of research of limited scope and/or that serves as proof-of principle for larger-scale studies.

Regular Articles

Papers of up to 6,000 words that report a substantive piece of research that makes a significant contribution and has clear implications for practice. Manuscripts reporting the results of randomized trials or interventions must demonstrate adherence to the CONSORT guidelines and include the relevant flow diagram and completed checklist.

Reviews

Papers of up to 10,000 words that provide a comprehensive overview of a significant area of research. Quantitative (e.g., meta-analyses) and qualitative reviews are welcome as long as they go beyond a mere description of the available literature and synthesise new knowledge with clear implications for future directions and practice. For systematic reviews and meta-analyses, authors must demonstrate adherence to the PRISMA guidelines (www.prisma-statement.org) and include the relevant flow diagram and checklist.

Commentaries

We welcome brief commentaries of no more than 1,000 words that offer new insights on papers published in RASD or elsewhere. Commentaries on government policy and/or items in the media are also welcome.

Registered Reports

Registered reports are a form of empirical article in which the rationale, methods, and proposed analyses are pre-registered and reviewed prior to research being conducted. This format seeks to neutralise a variety of unhelpful research practices and biases that contribute to the many inconsistencies in findings that currently exist in the autism and wider

literature. This format is suitable for novel as well as replication studies and we particularly welcome submissions describing proposed studies involving under-represented groups in research such as the elderly, minority groups and individuals with complex support needs. For further details please click RASD Registered Reports Author Guidelines.

NOTE: Word limits do not include the title page, abstract, figure legends, tables and reference list.

Peer review

This journal follows a single anonymized review process. Your submission will initially be assessed by our editors to determine suitability for publication in this journal. If your submission is deemed suitable, it will typically be sent to a minimum of two reviewers for an independent expert assessment of the scientific quality. The decision as to whether your article is accepted or rejected will be taken by our editors. Authors who wish to appeal the editorial decision for their manuscript may submit a formal appeal request in accordance with the procedure outlined in Elsevier's Appeal Policy. Only one appeal per submission will be considered and the appeal decision will be final.

Read more about peer review.

Our editors are not involved in making decisions about papers which:

- they have written themselves.
- have been written by family members or colleagues.
- relate to products or services in which they have an interest.

Any such submissions will be subject to the journal's usual procedures and peer review will be handled independently of the editor involved and their research group. Read more about editor duties.

Special issues and article collections

The peer review process for special issues and article collections follows the same process as outlined above for regular submissions, except, a guest editor will send the submissions out to the reviewers and may recommend a decision to the journal editor. The journal editor oversees the peer review process of all special issues and article collections to ensure the high standards of publishing ethics and responsiveness are respected and is responsible for the final decision regarding acceptance or rejection of articles.

Open access

We refer you to our open access information page to learn about open access options for this journal.

Ethics and policies

Ethics in publishing

Authors must follow ethical guidelines stated in Elsevier's Publishing Ethics Policy.

Submission declaration

When authors submit an article to an Elsevier journal it is implied that:

- the work described has not been published previously except in the form of a preprint, an abstract, a published lecture, academic thesis or registered report. See our policy on multiple, redundant or concurrent publication.
- the article is not under consideration for publication elsewhere.
- the article's publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out.
- if accepted, the article will not be published elsewhere in the same form, in English or in any other language, including electronically, without the written consent of the copyright-holder.

To verify compliance with our journal publishing policies, we may check your manuscript with our screening tools.

Authorship

All authors should have made substantial contributions to all of the following:

1. The conception and design of the study, or acquisition of data, or analysis and interpretation of data.
2. Drafting the article or revising it critically for important intellectual content.
3. Final approval of the version to be submitted.

Authors should appoint a corresponding author to communicate with the journal during the editorial process. All authors should agree to be accountable for all aspects of the work to ensure that the questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Changes to authorship

The editors of this journal generally will not consider changes to authorship once a manuscript has been submitted. It is important that authors carefully consider the authorship list and order of authors and provide a definitive author list at original submission.

The policy of this journal around authorship changes:

- All authors must be listed in the manuscript and their details entered into the submission system.
- Any addition, deletion or rearrangement of author names in the authorship list should only be made prior to acceptance, and only if approved by the journal editor.
- Requests to change authorship should be made by the corresponding author, who must provide the reason for the request to the journal editor with written confirmation from all authors, including any authors being added or removed, that they agree with the addition, removal or rearrangement.
- All requests to change authorship must be submitted using this form. Requests which do not comply with the instructions outlined in the form will not be considered.
- Only in exceptional circumstances will the journal editor consider the addition, deletion or rearrangement of authors post acceptance.
- Publication of the manuscript may be paused while a change in authorship request is being considered.
- Any authorship change requests approved by the journal editor will result in a corrigendum if the manuscript has already been published.
- Any unauthorised authorship changes may result in the rejection of the article, or retraction, if the article has already been published.

Declaration of interests

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence or bias their work. Examples of potential competing interests include:

- Employment
- Consultancies
- Stock ownership
- Honoraria
- Paid expert testimony
- Patent applications or registrations
- Grants or any other funding

The Declaration of Interests tool should always be completed.

Authors with no competing interests to declare should select the option, "I have nothing to declare".

The resulting Word document containing your declaration should be uploaded at the "attach/upload files" step in the submission process. It is important that the Word document is saved in the .doc/.docx file format. Author signatures are not required.

We advise you to read our policy on conflict of interest statements, funding source declarations, author agreements/declarations and permission notes.

Funding sources

Authors must disclose any funding sources who provided financial support for the conduct of the research and/or preparation of the article. The role of sponsors, if any, should be declared in relation to the study design, collection, analysis and interpretation of data, writing of the report and decision to submit the article for publication. If funding sources had no such involvement this should be stated in your submission.

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants, scholarships and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of generative AI in scientific writing

Authors must declare the use of generative AI in scientific writing upon submission of the paper. The following guidance refers only to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process:

- Generative AI and AI-assisted technologies should only be used in the writing process to improve the readability and language of the manuscript.
- The technology must be applied with human oversight and control and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. Authors are ultimately responsible and accountable for the contents of the work.
- Authors must not list or cite AI and AI-assisted technologies as an author or co-author on the manuscript since authorship implies responsibilities and tasks that can only be attributed to and performed by humans.

The use of generative AI and AI-assisted technologies in scientific writing must be declared by adding a statement at the end of the manuscript when the paper is first submitted. The statement will appear in the published work and should be placed in a new section before the references list. An example:

- Title of new section: Declaration of generative AI and AI-assisted technologies in the writing process.
- Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

The declaration does not apply to the use of basic tools, such as tools used to check grammar, spelling and references. If you have nothing to disclose, you do not need to add a statement.

Please read Elsevier's author policy on the use of generative AI and AI-assisted technologies, which can be found in our GenAI Policies for journals.

Please note: to protect authors' rights and the confidentiality of their research, this journal does not currently allow the use of generative AI or AI-assisted technologies such as ChatGPT or similar services by reviewers or editors in the peer review and manuscript evaluation process, as is stated in our GenAI Policies for journals. We are actively evaluating compliant AI tools and may revise this policy in the future.

Preprints

Preprint sharing

Authors may share preprints in line with Elsevier's article sharing policy. Sharing preprints, such as on a preprint server, will not count as prior publication.

We advise you to read our policy on multiple, redundant or concurrent publication.

Free preprint posting on SSRN

In support of open science this journal offers authors a free preprint posting service on SSRN to ensure early registration and dissemination of research and facilitate early citations and collaboration. Posting to SSRN is subject to SSRN's standard checks.

You will be provided with the option to release your manuscript on SSRN during the submission process. Agreeing to this option will have no effect on the editorial process or outcome, and your manuscript will remain publicly available and free to read on SSRN whether our editors accept or reject your manuscript.

You will receive an email when your preprint is posted online on SSRN and a Digital Object Identifier (DOI) is assigned.

Corresponding authors must seek approval from all co-authors before agreeing to release a manuscript publicly on SSRN.

We advise you to read about SSRN, including the SSRN Terms of Use and SSRN FAQs before selecting this option.

Use of inclusive language

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Authors should ensure their work uses inclusive language throughout and contains nothing which might imply one individual is superior to another on the grounds of:

- age
- gender
- race
- ethnicity
- culture
- sexual orientation
- disability or health condition

We recommend avoiding the use of descriptors about personal attributes unless they are relevant and valid. Write for gender neutrality with the use of plural nouns ("clinicians, patients/clients") as default. Wherever possible, avoid using "he, she," or "he/she."

No assumptions should be made about the beliefs of readers and writing should be free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions.

These guidelines are meant as a point of reference to help you identify appropriate language but are by no means exhaustive or definitive.

Reporting sex- and gender-based analyses

There is no single, universally agreed-upon set of guidelines for defining sex and gender. We offer the following guidance:

- Sex and gender-based analyses (SGBA) should be integrated into research design when research involves or pertains to humans, animals or eukaryotic cells. This should be done in accordance with any requirements set by funders or sponsors and best practices within a field.
- Sex and/or gender dimensions of the research should be addressed within the article or declared as a limitation to the generalizability of the research.

- Definitions of sex and/or gender applied should be explicitly stated to enhance the precision, rigor and reproducibility of the research and to avoid ambiguity or conflation of terms and the constructs to which they refer.

We advise you to read the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER checklist (PDF) on the EASE website, which offer systematic approaches to the use of sex and gender information in study design, data analysis, outcome reporting and research interpretation.

For further information we suggest reading the rationale behind and recommended use of the SAGER guidelines.

Definitions of sex and/or gender

We ask authors to define how sex and gender have been used in their research and publication. Some guidance:

- Sex generally refers to a set of biological attributes that are associated with physical and physiological features such as chromosomal genotype, hormonal levels, internal and external anatomy. A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth") and is in most cases based solely on the visible external anatomy of a newborn. In reality, sex categorizations include people who are intersex/have differences of sex development (DSD).
- Gender generally refers to socially constructed roles, behaviors and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society.

Jurisdictional claims

Elsevier respects the decisions taken by its authors as to how they choose to designate territories and identify their affiliations in their published content. Elsevier's policy is to take a neutral position with respect to territorial disputes or jurisdictional claims, including, but not limited to, maps and institutional affiliations. For journals that Elsevier publishes on behalf of a third party owner, the owner may set its own policy on these issues.

- Maps: Readers should be able to locate any study areas shown within maps using common mapping platforms. Maps should only show the area actually studied and authors should not include a location map which displays a larger area than the bounding box of the study area. Authors should add a note clearly stating that "*map lines delineate study areas and do not necessarily depict accepted national boundaries*". During the review process, Elsevier's editors may request authors to change maps if these guidelines are not followed.
- Institutional affiliations: Authors should use either the full, standard title of their institution or the standard abbreviation of the institutional

name so that the institutional name can be independently verified for research integrity purposes.

Writing and formatting

File format

We ask you to provide editable source files for your entire submission (including figures, tables and text graphics). Some guidelines:

- Save files in an editable format, using the extension .doc/.docx for Word files and .tex for LaTeX files. A PDF is not an acceptable source file.
- Lay out text in a single-column format.
- Remove any strikethrough and underlined text from your manuscript, unless it has scientific significance related to your article.
- Use spell-check and grammar-check functions to avoid errors.

We advise you to read our Step-by-step guide to publishing with Elsevier.

Title page

You are required to include the following details in the title page information:

- Article title. Article titles should be concise and informative. Please avoid abbreviations and formulae, where possible, unless they are established and widely understood, e.g., DNA).
- Author names. Provide the given name(s) and family name(s) of each author. The order of authors should match the order in the submission system. Carefully check that all names are accurately spelled. If needed, you can add your name between parentheses in your own script after the English transliteration.
- Affiliations. Add affiliation addresses, referring to where the work was carried out, below the author names. Indicate affiliations using a lower-case superscript letter immediately after the author's name and in front of the corresponding address. Ensure that you provide the full postal address of each affiliation, including the country name and, if available, the email address of each author.
- Corresponding author. Clearly indicate who will handle correspondence for your article at all stages of the refereeing and publication process and also post-publication. This responsibility includes answering any future queries about your results, data, methodology and materials. It is important that the email address and contact details of your corresponding author are kept up to date during the submission and publication process.
- Present/permanent address. If an author has moved since the work described in your article was carried out, or the author was visiting during that time, a "present address" (or "permanent address") can be indicated by a footnote to the author's name. The address where the

author carried out the work must be retained as their main affiliation address. Use superscript Arabic numerals for such footnotes.

Abstract

You are required to provide a concise and factual abstract which does not exceed 250 words. The abstract should briefly state the purpose of your research, principal results and major conclusions. Some guidelines:

- Abstracts must be able to stand alone as abstracts are often presented separately from the article.
- Avoid references. If any are essential to include, ensure that you cite the author(s) and year(s).
- Avoid non-standard or uncommon abbreviations. If any are essential to include, ensure they are defined within your abstract at first mention.

Keywords

You are required to provide 1 to 7 keywords for indexing purposes. Keywords should be written in English. Please try to avoid keywords consisting of multiple words (using "and" or "of").

We recommend that you only use abbreviations in keywords if they are firmly established in the field.

Highlights

You are encouraged to provide article highlights at submission.

Highlights are a short collection of bullet points that should capture the novel results of your research as well as any new methods used during your study. Highlights will help increase the discoverability of your article via search engines. Some guidelines:

- Submit highlights as a separate editable file in the online submission system with the word "highlights" included in the file name.
- Highlights should consist of 3 to 5 bullet points, each a maximum of 85 characters, including spaces.

We encourage you to view example article highlights and read about the benefits of their inclusion.

Graphical abstract

You are encouraged to provide a graphical abstract at submission.

The graphical abstract should summarize the contents of your article in a concise, pictorial form which is designed to capture the attention of a wide

readership. A graphical abstract will help draw more attention to your online article and support readers in digesting your research. Some guidelines:

- Submit your graphical abstract as a separate file in the online submission system.
- Ensure the image is a minimum of 531 x 1328 pixels (h x w) or proportionally more and is readable at a size of 5 x 13 cm using a regular screen resolution of 96 dpi.
- Our preferred file types for graphical abstracts are TIFF, EPS, PDF or MS Office files.

We encourage you to view example graphical abstracts and read about the benefits of including them.

Tables

Tables must be submitted as editable text, not as images. Some guidelines:

- Place tables next to the relevant text or on a separate page(s) at the end of your article.
- Cite all tables in the manuscript text.
- Number tables consecutively according to their appearance in the text.
- Please provide captions along with the tables.
- Place any table notes below the table body.
- Avoid vertical rules and shading within table cells.

We recommend that you use tables sparingly, ensuring that any data presented in tables is not duplicating results described elsewhere in the article.

Figures, images and artwork

Figures, images, artwork, diagrams and other graphical media must be supplied as separate files along with the manuscript. We recommend that you read our detailed artwork and media instructions. Some excerpts:

When submitting artwork:

- Cite all images in the manuscript text.
- Number images according to the sequence they appear within your article.
- Submit each image as a separate file using a logical naming convention for your files (for example, Figure_1, Figure_2 etc).
- Please provide captions for all figures, images, and artwork.
- Text graphics may be embedded in the text at the appropriate position. If you are working with LaTeX, text graphics may also be embedded in the file.

Artwork formats

When your artwork is finalized, "save as" or convert your electronic artwork to the formats listed below taking into account the given resolution requirements for line drawings, halftones, and line/halftone combinations:

- Vector drawings: Save as EPS or PDF files embedding the font or saving the text as "graphics."
- Color or grayscale photographs (halftones): Save as TIFF, JPG or PNG files using a minimum of 300 dpi (for single column: min. 1063 pixels, full page width: 2244 pixels).
- Bitmapped line drawings: Save as TIFF, JPG or PNG files using a minimum of 1000 dpi (for single column: min. 3543 pixels, full page width: 7480 pixels).
- Combinations bitmapped line/halftones (color or grayscale): Save as TIFF, JPG or PNG files using a minimum of 500 dpi (for single column: min. 1772 pixels, full page width: 3740 pixels).

Please do not submit:

- files that are too low in resolution (for example, files optimized for screen use such as GIF, BMP, PICT or WPG files).
- disproportionally large images compared to font size, as text may become unreadable.

Figure captions

All images must have a caption. A caption should consist of a brief title (not displayed on the figure itself) and a description of the image. We advise you to keep the amount of text in any image to a minimum, though any symbols and abbreviations used should be explained.

Provide captions in a separate file.

Color artwork

If you submit usable color figures with your accepted article, we will ensure that they appear in color online.

Please ensure that color images are accessible to all, including those with impaired color vision. Learn more about color and web accessibility.

For articles appearing in print, you will be sent information on costs to reproduce color in the printed version, after your accepted article has been sent to production. At this stage, please indicate if your preference is to have color only in the online version of your article or also in the printed version.

Generative AI and Figures, images and artwork

Please read our policy on the use of generative AI and AI-assisted tools in figures, images and artwork, which can be found in Elsevier's GenAI Policies for Journals. This policy states:

- We do not permit the use of Generative AI or AI-assisted tools to create or alter images in submitted manuscripts.
- The only exception is if the use of AI or AI-assisted tools is part of the research design or methods (for example, in the field of biomedical imaging). If this is the case, such use must be described in a reproducible manner in the methods section, including the name of the model or tool, version and extension numbers, and manufacturer.
- The use of generative AI or AI-assisted tools in the production of artwork such as for graphical abstracts is not permitted. The use of generative AI in the production of cover art may in some cases be allowed, if the author obtains prior permission from the journal editor and publisher, can demonstrate that all necessary rights have been cleared for the use of the relevant material, and ensures that there is correct content attribution.

Supplementary material

We encourage the use of supplementary materials such as applications, images and sound clips to enhance research. Some guidelines:

- Cite all supplementary files in the manuscript text.
- Submit supplementary materials at the same time as your article. Be aware that all supplementary materials provided will appear online in the exact same file type as received. These files will not be formatted or typeset by the production team.
- Include a concise, descriptive caption for each supplementary file describing its content.
- Provide updated files if at any stage of the publication process you wish to make changes to submitted supplementary materials.
- Do not make annotations or corrections to a previous version of a supplementary file.
- Switch off the option to track changes in Microsoft Office files. If tracked changes are left on, they will appear in your published version.

Video

This journal accepts video material and animation sequences to support and enhance your scientific research. We encourage you to include links to video or animation files within articles. Some guidelines:

- When including video or animation file links within your article, refer to the video or animation content by adding a note in your text where the file should be placed.

- Clearly label files ensuring the given file name is directly related to the file content.
- Provide files in one of our recommended file formats. Files should be within our preferred maximum file size of 150 MB per file, 1 GB in total.
- Provide "stills" for each of your files. These will be used as standard icons to personalize the link to your video data. You can choose any frame from your video or animation or make a separate image.
- Provide text (for both the electronic and the print version) to be placed in the portions of your article that refer to the video content. This is essential text, as video and animation files cannot be embedded in the print version of the journal.

We publish all video and animation files supplied in the electronic version of your article.

For more detailed instructions, we recommend that you read our guidelines on submitting video content to be included in the body of an article.

Research data

We are committed to supporting the storage of, access to and discovery of research data, and our research data policy sets out the principles guiding how we work with the research community to support a more efficient and transparent research process.

Research data refers to the results of observations or experimentation that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Please read our guidelines on sharing research data for more information on depositing, sharing and using research data and other relevant research materials.

For this journal, the following instructions from our research data guidelines apply.

Option C: Research data deposit, citation and linking

You are **required** to:

- Deposit your research data in a relevant data repository.
- Cite and link to this dataset in your article.
- If this is not possible, make a statement explaining why research data cannot be shared.

Data statement

To foster transparency, you are encouraged to state the availability of any data at submission.

Ensuring data is available may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you can state the reason why (e.g., your research data includes sensitive or confidential information such as patient data) during the submission process. This statement will appear with your published article on ScienceDirect.

Read more about the importance and benefits of providing a data statement.

Data linking

Linking to the data underlying your work increases your exposure and may lead to new collaborations. It also provides readers with a better understanding of the described research.

If your research data has been made available in a data repository there are a number of ways your article can be linked directly to the dataset:

- Provide a link to your dataset when prompted during the online submission process.
- For some data repositories, a repository banner will automatically appear next to your published article on ScienceDirect.
- You can also link relevant data or entities within the text of your article through the use of identifiers. Use the following format: Database: 12345 (e.g. TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

Learn more about linking research data and research articles in ScienceDirect.

Research Elements

This journal enables the publication of research objects (e.g. data, methods, protocols, software and hardware) related to original research in Elsevier's Research Elements journals.

Research Elements are peer-reviewed, open access journals which make research objects findable, accessible and reusable. By providing detailed descriptions of objects and their application with links to the original research article, your research objects can be placed into context within your article.

You will be alerted during submission to the opportunity to submit a manuscript to one of the Research Elements journals. Your Research Elements article can be prepared by you, or by one of your collaborators.

Article structure

Article sections

Divide your manuscript into clearly defined sections covering all essential elements using headings.

Glossary

Please provide definitions of field-specific terms used in your article, in a separate list.

Acknowledgements

Include any individuals who provided you with help during your research, such as help with language, writing or proof reading, in the acknowledgements section. Acknowledgements should be placed in a separate section which appears directly before the reference list. Do not include acknowledgements on your title page, as a footnote to your title, or anywhere else in your article other than in the separate acknowledgements section.

Author contributions: CRediT

Corresponding authors are required to acknowledge co-author contributions using CRediT (Contributor Roles Taxonomy) roles:

- Conceptualization
- Data curation
- Formal analysis
- Funding acquisition
- Investigation
- Methodology
- Project administration
- Resources
- Software
- Supervision
- Validation
- Visualization
- Writing – original draft
- Writing – review and editing

Not all CRediT roles will apply to every manuscript and some authors may contribute through multiple roles.

We advise you to read more about CRediT and view an example of a CRediT author statement.

Funding sources

Authors must disclose any funding sources who provided financial support for the conduct of the research and/or preparation of the article. The role of sponsors, if any, should be declared in relation to the study design, collection, analysis and interpretation of data, writing of the report and

decision to submit the article for publication. If funding sources had no such involvement this should be stated in your submission.

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants, scholarships and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Appendices

We ask you to use the following format for appendices:

- Identify individual appendices within your article using the format: A, B, etc.
- Give separate numbering to formulae and equations within appendices using formats such as Eq. (A.1), Eq. (A.2), etc. and in subsequent appendices, Eq. (B.1), Eq. (B. 2) etc. In a similar way, give separate numbering to tables and figures using formats such as Table A.1; Fig. A.1, etc.

References

References within text

Any references cited within your article should also be present in your reference list and vice versa. Some guidelines:

- References cited in your abstract must be given in full.
- We recommend that you do not include unpublished results and personal communications in your reference list, though you may mention them in the text of your article.
- Any unpublished results and personal communications included in your reference list must follow the standard reference style of the journal. In substitution of the publication date add "unpublished results" or "personal communication."

- References cited as "in press" imply that the item has been accepted for publication.

Linking to cited sources will increase the discoverability of your research.

Before submission, check that all data provided in your reference list are correct, including any references which have been copied. Providing correct reference data allows us to link to abstracting and indexing services such as Scopus, Crossref and PubMed. Any incorrect surnames, journal or book titles, publication years or pagination within your references may prevent link creation.

We encourage the use of Digital Object Identifiers (DOIs) as reference links as they provide a permanent link to the electronic article referenced.

Web references

When listing web references, as a minimum you should provide the full URL and the date when the reference was last accessed. Additional information (e.g. DOI, author names, dates or reference to a source publication) should also be provided, if known.

You can list web references separately under a new heading directly after your reference list or include them in your reference list.

Data references

We encourage you to cite underlying or relevant datasets within article text and to list data references in the reference list.

When citing data references, you should include:

- author name(s)
- dataset title
- data repository
- version (where available)
- year
- global persistent identifier

Add [dataset] immediately before your reference. This will help us to properly identify the dataset. The [dataset] identifier will not appear in your published article.

Preprint references

We ask you to mark preprints clearly. You should include the word "preprint" or the name of the preprint server as part of your reference and provide the preprint DOI.

Where a preprint has subsequently become available as a peer-reviewed publication, use the formal publication as your reference.

If there are preprints that are central to your work or that cover crucial developments in the topic, but they are not yet formally published, you may reference the preprint.

Reference management software

Most Elsevier journals have their reference template available in popular reference management software products. These include products that support Citation Style Language (CSL) such as Mendeley Reference Manager.

If you use a citation plug-in from these products, select the relevant journal template and all your citations and bibliographies will automatically be formatted in the journal style. We advise you to remove all field codes before submitting your manuscript to any reference management software product.

If a template is not available for this journal, follow the format given in examples in the reference style section of this Guide for Authors.

Submitting your manuscript

Submission checklist

Before completing the submission of your manuscript, we advise you to read our submission checklist:

- One author has been designated as the corresponding author and their full contact details (email address, full postal address and phone numbers) have been provided.
- All files have been uploaded, including keywords, figure captions and tables (including a title, description and footnotes) included.
- Spelling and grammar checks have been carried out.
- All references in the article text are cited in the reference list and vice versa.
- Permission has been obtained for the use of any copyrighted material from other sources, including the Web.
- For gold open access articles, all authors understand that they are responsible for payment of the article publishing charge (APC) if the manuscript is accepted. Payment of the APC may be covered by the corresponding author's institution, or the research funder.

Submit online

Our online submission system guides you through the process steps of entering your manuscript details and uploading your files. The system

converts your article files to a single PDF file used in the peer-review process.

Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the editor's decision and requests for revision, is sent by email.

Please follow this link to submit your paper.

After receiving a final decision

Article Transfer Service

If your manuscript is more suitable for an alternative Elsevier journal, you may receive an email asking you to consider transferring your manuscript via the Elsevier Article Transfer Service.

The recommendation could come from the journal editor, a dedicated in-house scientific managing editor, a tool-assisted recommendation or a combination.

If you agree with the recommendation, your manuscript will be transferred and independently reviewed by the editors of the new journal. You will have the opportunity to make revisions, if necessary, before the submission is complete at the destination journal.

Publishing agreement

Authors will be asked to complete a publishing agreement after acceptance. The corresponding author will receive a link to the online agreement by email. We advise you to read Elsevier's policies related to copyright to learn more about our copyright policies and your, and your employer’s/institution’s, additional rights for subscription and gold open access articles.

License options

Authors will be offered open access user license options which will determine how you, and third parties, can reuse your gold open access article. We advise that you review these options and any funding body license requirements before selecting a license option.

Open access

We refer you to our open access information page to learn about open access options for this journal.

Permission for copyrighted works

If excerpts from other copyrighted works are included in your article, you must obtain written permission from the copyright owners and credit the source(s) within your article using Elsevier's permission request and license form (Word).

Proof correction

To ensure a fast publication process we will ask you to provide proof corrections within two days.

Corresponding authors will be sent an email which includes a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to Word. You can edit text, comment on figures and tables and answer questions raised by our copy editor. Our web-based proofing service ensures a faster and less error-prone process.

You can choose to annotate and upload your edits on the PDF version of your article, if preferred. We will provide you with proofing instructions and available alternative proofing methods in our email.

The purpose of the proof is to check the typesetting, editing, completeness and correctness of your article text, tables and figures. Significant changes to your article at the proofing stage will only be considered with approval of the journal editor.

Offprints

A PDF file of your article will be sent by email to the corresponding author. The PDF file will be a watermarked version of your published article including a cover sheet with the journal cover image and a disclaimer outlining the terms and conditions of use.

For an extra charge, you will be provided with the option to order paper offprints. A link to an offprint order form will be sent by email when your article is accepted for publication.

Responsible sharing

We encourage you to share and promote your article to give additional visibility to your work, enabling your paper to contribute to scientific progress and foster the exchange of scientific developments within your field. Read more about how to responsibly share and promote your article.

Resources for authors

Elsevier Researcher Academy

If you would like help to improve your submission or navigate the publication process, support is available via Elsevier Researcher Academy.

Elsevier Researcher Academy offers free e-learning modules, webinars, downloadable guides and research writing and peer review process resources.

Language and editing services

We recommend that you write in American or British English but not a combination of both.

If you feel the English language in your manuscript requires editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English, you may wish to use the English Language Editing service provided by Elsevier's Author Services.

Getting help and support

Author support

We recommend that you visit our Journal Article Publishing Support Center if you have questions about the editorial process or require technical support for your submission. Some popular FAQs:

- How can I track the status of my submitted article?
- When will my article be published?

Appendix B

PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	16
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	17
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	18-21
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	21-22
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	23-24
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	22
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	22
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	23-24
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	23
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	N/A
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	23
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	24
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	N/A
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	N/A
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	N/A

Section and Topic	Item #	Checklist item	Location where item is reported
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	25
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	25
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	N/A
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N/A
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	N/A
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	25
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	26-28
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Appendix D
Study characteristics	17	Cite each included study and present its characteristics.	28-31
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	32 & Appendix E
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	N/A
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	N/A
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	N/A
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	N/A
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N/A
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	N/A
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	42 & Appendix F
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	42-44
	23b	Discuss any limitations of the evidence included in the review.	45-46

Section and Topic	Item #	Checklist item	Location where item is reported
	23c	Discuss any limitations of the review processes used.	45-46
	23d	Discuss implications of the results for practice, policy, and future research.	46-47
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	22
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	22
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	23
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	16
Competing interests	26	Declare any competing interests of review authors.	16
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	N/A

Appendix C

Specific Search Strategy by Database

The following databases were searched: EMBASE (Ovid), CINAHL Ultimate (EBSCOhost), MEDLINE Ultimate (EBSCOhost), PsycINFO (EBSCOhost), and Web of Science Core Collection. The search was adapted to each database's specific search requirements using a combination of the search terms showed below.

Search criteria incorporated the following search terms:

- Camouflaging:

camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*

- Autistic burnout:

burnout OR burn* out OR fatigue OR exhaust* OR overwhelm* OR function* OR toleran* OR withdraw* OR energy

- Autism:

autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD

EMBASE Ovid

((camouflag* or mask* or compensat* or pass* or imitat* or impression manag* or assimilat*) and (burnout or burn* out or fatigue or exhaust* or overwhelm* or function* or toleran* or withdraw* or energy)).af. and (autis* or asperger* or pervasive development* or ASD or ASC or PDD).ti.

CINAHL Ultimate EBSCOhost

(camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*) AND (burnout OR burn* out OR fatigue OR exhaust* OR

overwhelm* OR function* OR toleran* OR withdraw* OR energy) AND TI (autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD)

MEDLINE Ultimate EBSCOhost

(camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*) AND (burnout OR burn* out OR fatigue OR exhaust* OR overwhelm* OR function* OR toleran* OR withdraw* OR energy) AND TI (autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD)

PsycInfo EBSCOhost

(camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*) AND (burnout OR burn* out OR fatigue OR exhaust* OR overwhelm* OR function* OR toleran* OR withdraw* OR energy) AND TI (autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD)

Web of Science Core Collection

ALL=(camouflag* OR mask* OR compensat* OR pass* OR imitat* OR impression manag* OR assimilat*) AND ALL=(burnout OR burn* out OR fatigue OR exhaust* OR overwhelm* OR function* OR toleran* OR withdraw* OR energy) AND TI=(autis* OR asperger* OR pervasive development* OR ASD OR ASC OR PDD)

Appendix D

Studies Excluded at Full-text Level of Screening

Table D1

Studies Excluded at Full-text Level of Screening with Rationale

Citation	Rationale for Exclusion
Arnold et al. (2023)	No qualitative data related to camouflaging
Cook et al. (2018)	No qualitative data related to burnout
Halsall et al. (2021)	Unable to differentiate sufficient autistic participant contributions from parent/teacher contributions
Moseley et al. (2020)	Does not refer to camouflaging and burnout in relation to one another

Appendix E

CASP Quality Assessment Ratings

Table E1

CASP Quality Assessment Ratings

Study	CASP Item									
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
Angulo et al 2019	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes
Bargiela et al 2016	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Can't tell	Yes	Can't tell	Yes
Bradley et al 2021	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Can't tell	Yes	Yes	Yes
Chapman et al 2022	Yes	Yes	Can't tell	Can't tell	Yes	Can't tell	Yes	Yes	Yes	Yes
Finn et al 2023	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes
Harmens et al 2022	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes
Higgins et al 2021	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Yes	Yes	Yes	Yes
Howe et al 2023	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes
Hull et al 2017	Yes	Yes	Can't tell	Can't tell	Can't tell	Yes	Yes	Yes	Yes	Yes
Mantzalas et al 2022	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes	Yes	Yes	Yes
Miller et al 2021	Yes	Yes	Can't tell	Can't tell	Can't tell	Can't tell	Yes	Yes	Yes	Yes
Pearson et al 2023	Yes	Yes	Can't tell	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes
Raymaker et al 2020	Yes	Yes	Can't tell	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes
Tint & Weiss 2018	Yes	Yes	Yes	Can't tell	Can't tell	Can't tell	Yes	Can't tell	Yes	Yes

Appendix F

Thematic Analysis Themes and Codes with Supporting Quotes

Table F1

Thematic Analysis Themes and Codes with Supporting Quotes

Theme / Subtheme	Codes	Supporting Quotes
The energy cost of camouflaging	Camouflaging is energy consuming	“constantly monitor” (M202-D; Bradley et al, 2021) ‘‘constantly working and ticking” (F99-D; Bradley et al, 2021) ‘‘building patterns and sub-patterns to describe every situation based on every person’’ (M632-D; Bradley et al., 2021) “It’s like trying to solve mathematical equations in your head all day long while carrying on as normal’’ (F126-D; Bradley et al, 2021) ‘‘cognitively overloaded’’ (F9-D; Bradley et al, 2021) ‘‘takes too much energy to try and hide’’ (F37-D; Bradley et al, 2021) “Going outside for something that’s not rehearsed can take energy. Like if I just have to spontaneously go out to get a haircut, which I did this week, can take energy to do that” (Ppt 10; Chapman et al, 2022) “doesn’t come naturally” (P3; Finn et al, 2023) “I feel a lot of pressure to pay attention to absolutely everything, so if it’s in like an hour job interview most of that time is spent me thinking about how I’m acting towards them which I think most people don’t do in job interviews…I was thinking so much about how my hands are moving, am I moving them weird, I’m not sure if I answered the question” (P3; Finn et al, 2023) “It was like being an actor on stage, without break, for hours and hours every day.” (Blogger 4; Harmens et al, 2022) “It’s like studying for an exam, constantly on edge trying to predict what others will say and do.” (Female, 49; Hull et al, 2017) “I hate it. I go over and over and over what they said and what I said. Did I understand them correctly, did I respond appropriately, did I make a gaffe? Have I offended anyone?” (Female, 45; Hull et al, 2017) ‘‘It’s very draining trying to figure out everything all the time, everything is more like on a manual, you’ve got to use one of those computers where you have to type every command in.’’ (P01; Bargiela et al, 2016) “they really . . . just suck any mental, emotional, physical energy from me” (P1; Finn et al, 2023) “an enormous amount of effort” (P4; Finn et al, 2023) “brainpower” (P4 & P10; Finn et al, 2023)
	Camouflaging is exhausting and draining	“like flexing a muscle repeatedly in that you get tired out” (Cher; Angulo et al, 2019) “exhausting” (73 participants; Bradley et al, 2021) “tiring” (33 participants; Bradley et al, 2021) “It is EXHAUSTING” (F126-D; Bradley et al, 2021) “It’s so tiring, trying to constantly be on the ball” (Ppt 20; Chapman et al, 2022) “It’s exhausting!” (Other, 30; Hull et al, 2017)

		“It’s mentally exhausting constantly having to be something else” (Female, 20; Hull et al, 2017) “Masking is exhausting.” (Kerri; Pearson et al, 2023) “It makes me feel incredibly drained from having to mask.” (Angelina; Pearson et al, 2023) “I was SOOO tired & worn out from pretending” (Clementine; Pearson et al, 2023) “drained me completely” (Blogger 4; Harmens et al, 2022) ‘‘feels almost painful’’ (F483-D; Bradley et al, 2021) ‘‘It is hugely stressful and exhausting” (F159-D; Bradley et al, 2021) “the constant masking at work is exhausting” (T349; Mantzalas et al, 2022)
	Build-up of energy	“mini crisis” (Ivy, 14; Howe et al, 2023) ‘‘meltdown’’ (10 participants; Bradley et al, 2021) “When it does disappear in a context where I don’t want it to, that looks like a meltdown (crying, yelling, etc). When I’m in contexts where I will need more mask, I have to budget my time because it is exhausting.” (Lidia; Pearson et al, 2023) “break down” (Tint & Weiss, 2018) “It all came out. So like, all everything that built up from school it all just come out. And that’d make it worse at home. Kinda like angry and tearful and annoyed and shouting at my brother things like that” (Participant 8; Chapman et al, 2022)
Burnout: Camouflaging takes its toll	The toll / burnout	‘‘out of energy’’ (Maja; Angulo et al, 2019) “I do get burnt out very easily.’’ (Cher; Angulo et al, 2019) ‘‘really damaging’’ (F224-D; Bradley et al, 2021) ‘‘burnt-out’’ (F10-D; Bradley et al, 2021) “It can lead to a nasty case of burnout.” (WP108; Mantzalas et al, 2022) “The metaphor I use is that long-term camouflaging and masking leaves behind a kind of psychic plaque in the mental and emotional arteries. Like the buildup of physical plaque over time can result in heart attack or stroke, the buildup of this psychic plaque over time can result in burnout.” (Raymaker et al, 2020) “Masking is a tool that should be used to get things nothing less, nothing more. Like with anything in life overdoing it leads to problems. With masking they can be quite serious burnout, forgetting who you are, constant anxiety from fear of slipping and being exposed.” (WP9; Mantzalas et al, 2022) “the constant masking at work is exhausting and I ended up in burnout this weekend.” (T349; Mantzalas et al, 2022) “I have been masking my entire life either for safety reasons or to enable myself to keep a job. Over time it has caused massive burnout…I haven’t fully recovered.” (Noelle; Pearson et al, 2023) ‘‘It’s the most debilitating part of my ASD” (F118-D; Bradley et al, 2021) “it will be easier to not exist rather than to exist.” (Ppt 17; Chapman et al, 2022) ‘‘I didn’t learn that I only get suicidal during meltdowns until I removed all masking obligations. I spent 13 years burnt out’’ (Autistic nonbinary person, 34; Miller et al, 2021) Bradley et al (2021): participants described experiencing physical ill health (18 participants) such as ‘‘headaches’’ (6 participants), ‘‘gut issues’’ (F89-D), and ‘‘aching muscles’’ (F11-D) after camouflaging.

		“I did my best to try and fit in and the resultant masking of my autistic traits played havoc with my wellbeing.” (Blogger 18; Harmens et al, 2022) ‘‘no win’’ situation (Mantzalas et al, 2022)
	Functioning	Bradley et al (2021): Therefore, this made the ‘‘seemingly simple things’’ (F18-D) such as ‘‘eating or washing or brushing hair’’ (F35-D) difficult because camouflaging took all of their energy. “There are weeks when I cannot go to work because I don’t function well enough(.) There are days when I won’t go out of my apartment because I’ve gotten so used to being accepted as normal, so I can’t face the world when I am an Aspie.” (Maja; Angulo et al, 2019) ‘‘shut down several days a week’’ (F653-D; Bradley et al, 2021) not ‘‘leave the house’’ (M799-D; Bradley et al, 2021) “Usually like I can’t do anything else for the rest of that day, I’m usually completely wiped out social wise” (P5; Finn et al, 2023) “hard to function” (Ivy, 14; Howe et al, 2023) “it all turns to jelly, as do I’’ (Autistic man, 57; Miller et al, 2021) “Sometimes I can’t interact with friends and other people because I don’t have the strength to put on a mask.” (Norma; Pearson et al, 2023)
	Disconnection from self	“can feel like the whole world is gaslighting you. From being told not to be silly, the lights aren’t hurting you... you’re being told every day that your lived experience isn’t real.” (Blogger 2; Harmens et al, 2022) “I became so many different people that I felt I’d lost any sense of my own identity.” (Blogger 4; Harmens et al, 2022) “being in a world that is not your world and you have to change how you exist to make it all work” (Higgins et al, 2021) “literally never being able to be myself” (Female, 20; Hull et al, 2017) “If people don’t see the real you they can’t love the real you. It alienates you from people; even as it seems your relationships with people are improving, the amount of joy you derive from it decreases.” (WP108; Mantzalas et al, 2022) “I’ve spent so long masking to fit in that I can’t tell what my authentic self is. I like movies and tv shows and I look forward to watching them. I practice qi gong. Solitary pursuits. Being around other people leaves me exhausted. I lack any sense of purpose and I dread going to work.” (Scott; Pearson et al, 2023)
Too drained to disguise	Unable to keep masking	‘‘nothing left and can’t uphold this masquerade.’’ (Maja; Angulo et al, 2019) Bradley et al (2021): Others reported to camouflage less than they used to, because they just found it too ‘‘exhausting’’ (M657-D) and ‘‘extremely tiring’’ (F25-D) because it ‘‘takes too much energy to try and hide’’ (F37-D) “I couldn’t keep acting the way people expected” (Higgins et al, 2021) ‘‘taking the mask off,’’ (Mantzalas et al, 2022) “I was simply unable to keep masking my autism, and there’s no putting the lid on again (nor would I want to)” (T262, Mantzalas et al, 2022)

		“I was that girl crying on the bus because she couldn’t control herself in public, I lost the mask, the trauma made the mask drip, that I couldn’t control myself in public, and I’m very good at putting the stone face on and getting through” (Jasmine; Pearson et al., 2023).
Time and space to recharge	Need to recover	‘‘the need to shut in and recover, (.) let that muscle heal.’’ (Cher; Angulo et al, 2019) Bradley et al (2021): participants needed time to ‘‘recover’’ (F30-D) and ‘‘recharge’’ (M630-D) “I needed that time to recover and be myself unfiltered” (Higgins et al, 2021) “I need to just shut down and take some time to rebuild back up before I can face the next task for the day” (P8; Finn et al, 2023)
	Recharging activities	“now I need some time alone…I need a day to me.” (Cher; Angulo et al, 2019) “I would just sit and cut pieces of leather into strips for hours on end, alone and in silence” (Higgins et al, 2021) “helped to calm me down after a long day of masking and stuff” (Lisa, 10; Howe et al, 2023)
Unmasking is a balance	Need to unmask	“what does it feel like when you’re not masking?” Lisa: “Normal and calm.” (Howe et al, 2023) “I needed that time to recover and be myself unfiltered” (Higgins et al, 2021) “I feel the need to seek solitude so I can ‘be myself’” (Other, 30; Hull et al, 2017) “Masking is a skill but can feel like a curse. We need to remind ourselves to unmask, otherwise we risk burning out. And we deserve better.” (T19; Mantzalas et al, 2022) “Stimming is the autistic way of dealing with stress. Even a few minutes here and there in the bathroom could be of help.” (WP9; Mantzalas et al, 2022) “I can now, as a recluse, be myself…But before, it was all masking, all exhausting, all identity-denying” (Carter; Pearson et al, 2023) “When I’m in contexts where I will need more mask, I have to budget my time because it is exhausting.” (Lidia; Pearson et al, 2023) “provided some periods of time where I likely was needing to mask less, or less intensely.” (Raymaker et al, 2020) “The biggest thing of all you can do to prevent, or at least mitigate burnout, is to start identifying what you do when you Mask and stop. Even just little things like eye contact, which so many of us do, or at least pretend to do.” (Raymaker et al, 2020) “Allow yourself not to be sociable if you don’t want to be. Give yourself permission to duck out of situations you can’t cope with instead of pretending you can.” (Raymaker et al, 2020)
	Masking isn’t necessarily bad	“I am glad that the camouflaging enables me to survive within myself and accomplish any necessary tasks” (Male, 62; Hull et al, 2017) “Small sense of achievement and relief that it is over.” (Male, 69; Hull et al, 2017) “(Masking) is a survival skill I have adapted and cannot turn off. It is a hard-won battle scar that deflects potential future pain.” (Lidia; Pearson et al, 2023)
	Unmasking is complex	“I know that the breakdown and following burnout is because I was simply unable to keep masking my autism, and there’s no putting the lid on again (nor would I want to), but it’s still a complex set of relations that underpin this change.” (T262; Mantzalas et al, 2022)

		“who take the attitude that if I could conceal my traits before, then there is no reason why I shouldn’t continue to” (WP106; Mantzalas et al, 2022) “The second I stopped masking at work due to autistic burnout, I was severely ostracised.” (George; Pearson et al, 2023)
The autistic struggle	Others don’t recognise the toll	“People praise us for what we are capable of and what we have achieved thanks to our performance . . . but no one stops to consider the toll it takes on us” (Higgins et al, 2021) “I get told by everyone that I seem to be managing my autism well [.] but the constant masking at work is exhausting and I ended up in burnout this weekend.” (T349; Mantzalas et al, 2022) “I have encountered some people who either will not believe my diagnosis or who take the attitude that if I could conceal my traits before, then there is no reason why I shouldn’t continue to” (WP106; Mantzalas et al, 2022) “I’m not one to make a scene. I don’t even want to be in a scene! I try to always be behind the scenes! So, to the outside observer I’m sure I look passable - no one is going to expect that inside I’m driving myself crazy.” (P15; Tint & Weiss, 2018)
	Diagnosis and identification	“When you have worked so hard to hold yourself together for so long, it is not easy to submit yourself to a process. We often worry that assessors are trying to trick us, to catch us out” (Blogger 7; Harmens et al, 2022) “What potentially could have helped prevent burnout would have been an earlier diagnosis, which potentially could have meant less need to camouflage.” (Raymaker et al, 2020)

Appendix G

GRADE-CERQual Assessment Findings

Table F1

GRADE-CERQual Assessment Findings

Finding	Contributing Studies	Methodological Limitations	Coherence	Data Adequacy	Relevance	Confidence	Explanation
The energy cost of camouflaging	11	Minor concerns (77.27% 'yes' ratings, 22.73% 'can't tell' ratings)	Minor concerns. Good coherence across the data with the evidence strongly supporting the finding for the most part and no contraindications. Less data to provide evidence for the build-up and dysregulation, so some interpretation required within the synthesised element.	No/very minor concerns. Data from 11 studies supported the finding. Of those, 5 provided support through data from more than one participant and 3 provided rich data. Supporting evidence from Bradley et al (2021) was provided from over 100 participants.	Minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 5 studies with direct relevance, 5 studies with partial relevance due to broader topic area, and 1 study with partial relevance due to including a sample of non-autistic participants.	High confidence	11 studies with minor concerns about methodological limitations. Minor concerns about coherence and relevance, and no or very minor concerns about data adequacy.
Burnout: Camouflaging takes its toll	12	Minor concerns (79.17% 'yes' ratings, 20.83% 'can't tell' ratings)	Moderate concerns. Most evidence supports the finding but differing terminology and definitions may impact on coherence of data and reviewer interpretation. Small amount of contradicting data (which is evidenced in different finding).	Minor concerns. Data from 12 studies supported the finding. Of those, 6 provided support through data from more than one participant and 3 provided rich data. Supporting data for this finding is also enhanced through the related data used within the subtheme.	Minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 7 studies with direct relevance, 3 studies with partial relevance due to broader topic area, and 2 studies with partial relevance due to including a sample of non-autistic participants.	Moderate confidence	12 studies with minor concerns about methodological limitations. Moderate concerns about coherence due to contradictions and terminology differences. Minor concerns about data adequacy and relevance.

Finding	Contributing Studies	Methodological Limitations	Coherence	Data Adequacy	Relevance	Confidence	Explanation
Too drained to disguise	5	Very minor concerns (80% 'yes' ratings, 20% 'can't tell' ratings)	Minor concerns. Good coherence across the data but a limited amount of evidence supporting finding.	Moderate concerns. Data from 5 studies supported the finding. Of those, 2 provided support through data from more than one participant and 3 provided rich data.	Minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 3 studies with direct relevance, 1 study with partial relevance due to broader topic area, and 1 study with partial relevance due to including a sample of non-autistic participants.	Moderate confidence	5 studies with very minor concerns about methodological limitations. Moderate concerns about data adequacy due to a limited quantity of supporting studies. Minor concerns about coherence and relevance.
Time and space to recharge	5	Very minor concerns (84% 'yes' ratings, 16% 'can't tell' ratings)	Minor concerns. Good coherence across the data but a limited amount of evidence supporting finding.	Moderate concerns. Data from 5 studies supported the finding. Of those, 2 provided support through data from more than one participant and 3 provided rich data. Supporting data for this finding is also enhanced through the related data used within the subtheme.	No/very minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 4 studies with direct relevance and 1 study with partial relevance due to broader topic area.	Moderate confidence	5 studies with very minor concerns about methodological limitations. Moderate concerns about data adequacy due to a limited quantity of supporting studies. Minor concerns about coherence and no or very minor concerns about relevance.

Finding	Contributing Studies	Methodological Limitations	Coherence	Data Adequacy	Relevance	Confidence	Explanation
Unmasking is a balancing act	7	Very minor concerns (81.43% 'yes' ratings, 18.57% 'can't tell' ratings)	No/very minor concerns. Good coherence across the data with the evidence strongly supporting the finding. Complex and nuanced nature of contradicting data reflected in finding.	Minor concerns. Data from 7 studies supported the finding. Of those, 4 provided support through data from more than one participant and 4 provided rich data.	Minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 4 studies with direct relevance, 2 studies with partial relevance due to broader topic area, and 1 study with partial relevance due to including a sample of non-autistic participants.	High confidence	7 studies with very minor concerns about methodological limitations. Minor concerns about data adequacy and relevance, and no or very minor concerns about coherence.
The autistic struggle	6	Minor concerns (76.67% 'yes' ratings, 23.33% 'can't tell' ratings)	Minor concerns. Good coherence across the data with evidence in support of the finding, but may have alternative interpretations.	Moderate concerns. Data from 6 studies supported the finding. Of those, only 1 provided support through data from more than one participant but all 6 provided rich data.	Minor concerns. All supporting studies met the inclusion criteria. The finding uses data from 3 studies with direct relevance, 2 studies with partial relevance due to broader topic area, and 1 study with partial relevance due to including a sample of non-autistic participants.	Moderate confidence	6 studies with minor concerns about methodological limitations. Moderate concerns about data adequacy due to a limited quantity of supporting studies. Minor concerns about coherence and relevance.

Appendix H

Online Survey via PsyToolkit

Please create your unique identification code by using the first three letters of your surname and the last two digits of the year you were born e.g., Will Smith born in 1985 = SMI85

_____

Do you have a diagnosis of Autism Spectrum Disorder?

(This includes previous diagnoses of Autism, Asperger's Syndrome, Pervasive Developmental disorder, and Pervasive Developmental disorder - not otherwise specified [PDD-NOS]).

☐ Yes
☐ No

⇨ **Note, in the online version, there is a conditional jump here.**

⇨ **Note, in the online version, there is a conditional jump here.**

Thank you for your interest in this research. Unfortunately an official diagnosis of autism is needed to participate at this time. This is so we can look at the impact of timing of diagnosis. The findings of this research may then inform further research looking at the impact of stage of diagnosis journey, including self-diagnosis and awaiting an assessment.

⇨ **Note, in the online version, there is a conditional jump here.**

The following questions will ask you about your demographic information.

How old are you?

What is your sex?
A question on gender identity will follow.

☐ Female
☐ Male
☐ Other
☐ Prefer not to say

Is the gender you identify with the same as your sex registered at birth?

☐ Yes
☐ No (please specify)
☐ Prefer not to say

What is your country of residence?

☐ England, United Kingdom
☐ Scotland, United Kingdom
☐ Wales, United Kingdom
☐ Northern Ireland, United Kingdom
☐ United States
☐ Canada
☐ Australia
☐ Other
☐ Prefer not to say

What is your nationality?

☐ English, British
☐ Scottish, British
☐ Welsh, British
☐ Northern Irish, British
☐ American

☐ Canadian
☐ Australian
☐ Other
☐ Prefer not to say

What is your ethnicity?

☐ Asian/Asian British
☐ Black/African/Caribbean/Black British
☐ Mixed or multiple ethnic groups
☐ White
☐ Other ethnic group
☐ Prefer not to say

Do you practice a religion, and if so, which one?

☐ None (atheism)
☐ Buddhism
☐ Christianity
☐ Hinduism
☐ Islam
☐ Judaism
☐ Paganism
☐ Sikhism
☐ Other
☐ Prefer not to say

What is your primary language?

_____

What is the highest level of education you have completed?

☐ Primary education
☐ Secondary education (GCSEs or equivalent)
☐ Further education (A-levels or equivalent)

☐ University undergraduate programme (BA, BSc, or equivalent)
☐ University post-graduate programme (MA, MSc, or equivalent)
☐ Doctoral degree (PhD or equivalent)
☐ Prefer not to say

What best describes your employment status?

☐ Unemployed
☐ Full-time student with further employment
☐ Full-time student without further employment
☐ Part-time student with further employment
☐ Part-time student without further employment
☐ Self-employed full-time
☐ Self-employed part-time
☐ Full-time employment within organisation/company
☐ Part-time employment within organisation/company
☐ Retired
☐ Prefer not to say

The following questions will ask about your **autism diagnosis**.

Which diagnosis term was you given / do you use?

☐ Autism Spectrum disorder (ASD)
☐ Asperger's Syndrome
☐ Pervasive Developmental disorder (PDD)
☐ Pervasive Developmental disorder - Note Otherwise Specified (PDD-NOS)
☐ Other
☐ Prefer not to say

How old were you when you received an autism diagnosis?

_____

Where did you receive your diagnosis of autism?

☐ England, United Kingdom
☐ Scotland, United Kingdom
☐ Wales, United Kingdom
☐ Northern Ireland, United Kingdom
☐ United States
☐ Please specify US state
☐ Canada
☐ Australia
☐ Other

Who diagnosed you with autism?

☐ Clinical Psychologist
☐ Psychiatrist
☐ Psychotherapist
☐ Occupational Therapist
☐ General Practitioner
☐ Other
☐ I don't know

Where did you receive your diagnosis of autism?

☐ Autism Diagnostic Service for Children/Adolescents
☐ Autism Diagnostic Service for Adults
☐ Mental Health Service for Children/Adolescents
☐ Mental Health Service for Adults
☐ Other

How old were you when you were **referred** for an autism assessment?

_____

Who referred you for your autism diagnosis?

☐ General Practitioner (GP)

☐ Psychiatrist
☐ Psychologist/Psychotherapist
☐ Occupational Therapist
☐ Speech and Language Therapist
☐ Support Worker
☐ Other
☐ I don't know

How old were you when you identified yourself as being autistic / having autism?

(For example, some people may know they are autistic whilst waiting for an official diagnosis, whereas for others, they may not identify with their autism until after coming to terms with the diagnosis etc.)

_____

Who first identified that you may be autistic?

☐ Myself
☐ Parent
☐ Teacher
☐ Professional (please specify)
☐ Other

Everyone uses different terminology when talking about autism.

Some people prefer identity-first language ("I am autistic), some people prefer person-first language ("I have autism"), and others prefer different terms (e.g., "on the autism spectrum").
Which term do you prefer? (This will not change within the survey but will be used to guide the report writing process).

☐ Autistic people
☐ People with autism
☐ People on the spectrum
☐ Other
☐ I have no preference

☐ Prefer not to say

Do you have any additional mental health or neurodevelopmental conditions / diagnoses? (select all that apply)

Neurodevelopmental conditions

☐ Attention-deficit hyperactivity disorder (ADHD)
☐ Developmental coordination disorder (dyspraxia)
☐ Specific learning difficulty (e.g. dyslexia, dyscalculia, dysgraphia)
☐ Speech or language disorders
☐ Tourette's syndrome or other tic disorders
☐ Other neurodevelopmental conditions

Anxiety disorders

☐ Generalised anxiety disorder
☐ Social anxiety disorder
☐ Selective mutism
☐ Separation anxiety disorder
☐ Specific phobia
☐ Panic disorder
☐ Other anxiety or fear-related disorder

Mood disorders

☐ Depressive disorder
☐ Bipolar disorders
☐ Other mood disorders

☐ Obsessive-compulsive disorders *(e.g. obsessive-compulsive disorder, body dysmorphic disorder, hoarding disorder)*
☐ Trauma-related disorders *(e.g. post-traumatic stress disorder, complex post-traumatic stress disorder)*

☐ Eating or feeding disorder *(e.g. anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant-restrictive food intake disorder, pica)*
☐ Personality disorders
☐ Schizophrenia or other psychotic disorders
☐ Substance use or addictive disorders
☐ Other mental health condition/disorder
☐ Prefer not to say

Autism Quotient (AQ-10; Allison et al., 2012)

The following questions will ask about autistic traits you may experience and how much you agree with the statement.

Please tick one option per question

	Definitely agree	**Slightly agree**	**Slightly disagree**	**Definitely disagree**
I often notice small sounds when others do not	☐	☐	☐	☐
I usually concentrate more on the whole picture, rather than the small details	☐	☐	☐	☐
I find it easy to do more than one thing at once	☐	☐	☐	☐
If there is an interruption, I can switch back to what I was doing very quickly	☐	☐	☐	☐
I find it easy to ‘read between the lines’ when someone is talking to me	☐	☐	☐	☐
I know how to tell if someone listening to me is getting bored	☐	☐	☐	☐
When I’m reading a story I find it difficult to work out the characters’ intentions	☐	☐	☐	☐
I like to collect information about categories of things (e.g. types of car, types of bird, types of train, types of plant etc)	☐	☐	☐	☐

I find it easy to work out what someone is thinking or feeling just by looking at their face	☐	☐	☐	☐
I find it difficult to work out people's intentions	☐	☐	☐	☐

Camouflaging Autistic Traits Questionnaire (CAT-Q; Hull et al., 2019)

The following questions will ask about camouflaging behaviours you may or may not use, and the degree to which you use them. Please answer with how much you agree or disagree with the statement.

Please tick one option per question only

	Strongly disagree	**Disagree**	**Somewhat disagree**	**Neither agree not disagree**	**Somewhat agree**	**Agree**	**Strongly agree**
When I am interacting with someone, I deliberately copy their body language or facial expressions.	☐	☐	☐	☐	☐	☐	☐
I monitor my body language or facial expressions so that I appear relaxed.	☐	☐	☐	☐	☐	☐	☐
I rarely feel the need to put on an act in order to get through a social situation.	☐	☐	☐	☐	☐	☐	☐

I have developed a script to follow in social situations.	☐	☐	☐	☐	☐	☐	☐
I will repeat phrases that I have heard others say in the exact same way that I first heard them.	☐	☐	☐	☐	☐	☐	☐
I adjust my body language or facial expressions so that I appear interested by the person I am interacting with.	☐	☐	☐	☐	☐	☐	☐
In social situations, I feel like I'm 'performing' rather than being myself.	☐	☐	☐	☐	☐	☐	☐
In my own social interactions, I use behaviours that I have learned from watching other people interacting.	☐	☐	☐	☐	☐	☐	☐
I always think about the impression I make on other	☐	☐	☐	☐	☐	☐	☐

people.							
I need the support of other people in order to socialise.	☐	☐	☐	☐	☐	☐	☐
I practice my facial expressions and body language to make sure they look natural.	☐	☐	☐	☐	☐	☐	☐
I don’t feel the need to make eye contact with other people if I don’t want to.	☐	☐	☐	☐	☐	☐	☐
I have to force myself to interact with people when I am in social situations.	☐	☐	☐	☐	☐	☐	☐
I have tried to improve my understanding of social skills by watching other people.	☐	☐	☐	☐	☐	☐	☐
I monitor my body language or facial expressions so that I appear interested by the person I am interacting	☐	☐	☐	☐	☐	☐	☐

with.

When in social situations, I try to find ways to avoid interacting with others.	☐	☐	☐	☐	☐	☐	☐
I have researched the rules of social interactions to improve my own social skills.	☐	☐	☐	☐	☐	☐	☐
I am always aware of the impression I make on other people.	☐	☐	☐	☐	☐	☐	☐
I feel free to be myself when I am with other people.	☐	☐	☐	☐	☐	☐	☐
I learn how people use their bodies and faces to interact by watching television or films, or by reading fiction.	☐	☐	☐	☐	☐	☐	☐
I adjust my body language or facial expressions so that I appear relaxed.	☐	☐	☐	☐	☐	☐	☐

When talking to other people, I feel like the conversation flows naturally.	☐	☐	☐	☐	☐	☐	☐
I have spent time learning social skills from television shows and films and try to use these in my interactions.	☐	☐	☐	☐	☐	☐	☐
In social interactions, I do not pay attention to what my face or body are doing.	☐	☐	☐	☐	☐	☐	☐
In social situations, I feel like I am pretending to be ‘normal’.	☐	☐	☐	☐	☐	☐	☐

Self-concept Clarity Scale (SCCS; Campbell et al., 1996)

The following questions will ask you about your understanding of your self-concept and beliefs about yourself.

Please rate with how much you agree or disagree with the following statements.

	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
My beliefs about myself often conflict with one another	☐	☐	☐	☐	☐

On one day I might have one opinion of myself and on another day I might have a different opinion	☐	☐	☐	☐	☐
I spend a lot of time wondering about what kind of person I really am	☐	☐	☐	☐	☐
Sometimes I feel that I am not really the person that I appear to be	☐	☐	☐	☐	☐
When I think about the kind of person I have been in the past, I'm not sure what I was really like	☐	☐	☐	☐	☐
I seldom experience conflict between the different aspects of my personality	☐	☐	☐	☐	☐
Sometimes I think I know other people better than I know myself	☐	☐	☐	☐	☐
My beliefs about myself seem to change very frequently	☐	☐	☐	☐	☐
If I were asked to describe my personality, my description might end up being different from one day to another day	☐	☐	☐	☐	☐
Even if I wanted to, I don't think I could tell someone what I'm really like	☐	☐	☐	☐	☐
In general, I have a clear sense of who I am and what I am	☐	☐	☐	☐	☐
It is often hard for me to make up my mind about things because I don't really know what I want	☐	☐	☐	☐	☐

Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) and General Anxiety Disorder scale (GAD-7; Spitzer et al., 2006)

The following questions will ask about your mood and difficulties you may have been experiencing.

Over the **last 2 weeks**, how often have you been bothered by any of the following problems?

	not at all	**several days**	**more than half the days**	**nearly every day**
Little interest or pleasure in doing things	☐	☐	☐	☐
Feeling down, depressed, or hopeless	☐	☐	☐	☐
Trouble falling or staying asleep, or sleeping too much	☐	☐	☐	☐
Feeling tired or having little energy	☐	☐	☐	☐
Poor appetite or overeating	☐	☐	☐	☐
Feeling bad about yourself - or that you are a failure or have let yourself or your family down	☐	☐	☐	☐
Trouble concentrating on things, such as reading the newspaper or watching television	☐	☐	☐	☐
Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual	☐	☐	☐	☐
Thoughts that you would be better off dead or of hurting yourself in some way	☐	☐	☐	☐

Over the last 2 weeks, how often have you been bothered by the following problems?

	not at all	**several days**	**more than half the days**	**nearly every day**

Feeling nervous, anxious or on edge	☐	☐	☐	☐
Not being able to stop or control worrying	☐	☐	☐	☐
Worrying too much about different things	☐	☐	☐	☐
Trouble relaxing	☐	☐	☐	☐
Being so restless that it is hard to sit still	☐	☐	☐	☐
Becoming easily annoyed or irritable	☐	☐	☐	☐
Feeling afraid as if something awful might happen	☐	☐	☐	☐

Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987)

The following questions will ask about whether you experience any anxiety in different social situations.

Read each situation carefully and answer two questions about it; the first set of questions ask how anxious or fearful you feel in the situation; the second set of questions ask how often you avoid the situation.

Read each situation carefully and answer with how **anxious or fearful** you feel in the situation.

If you come across a situation that you ordinarily do not experience, please imagine "what if you were faced with that situation?", and then rate the degree to which you would fear this hypothetical situation.
Please base your ratings on the way that situations have affected you in the last week.

	None	**Mild**	**Moderate**	**Severe**
Telephoning in public	☐	☐	☐	☐
Participating in small groups	☐	☐	☐	☐

Eating in public places	☐	☐	☐	☐
Drinking with others in public places	☐	☐	☐	☐
Talking to people in authority	☐	☐	☐	☐
Acting, performing, or giving a talk in front of an audience	☐	☐	☐	☐
Going to a party	☐	☐	☐	☐
Working while being observed	☐	☐	☐	☐
Writing while being observed	☐	☐	☐	☐
Calling someone you don't know very well	☐	☐	☐	☐
Talking with people you don't know very well	☐	☐	☐	☐
Meeting strangers	☐	☐	☐	☐
Urinating in a public bathroom	☐	☐	☐	☐
Entering a room when others are already seated	☐	☐	☐	☐
Being the centre of attention	☐	☐	☐	☐
Speaking up at a meeting	☐	☐	☐	☐
Taking a test	☐	☐	☐	☐
Expressing a disagreement or disapproval to people you don't know very well	☐	☐	☐	☐
Looking at people you don't know very well in the eyes	☐	☐	☐	☐
Giving a report to a group	☐	☐	☐	☐
Trying to pick up someone	☐	☐	☐	☐
Returning goods to a store	☐	☐	☐	☐

Giving a party	☐	☐	☐	☐
Resisting a high-pressure salesperson	☐	☐	☐	☐

Read each situation carefully and answer with how often you **avoid** the situation.

If you come across a situation that you ordinarily do not experience, please imagine "what if you were faced with that situation?", and then rate how often you would tend to avoid it.
Please base your ratings on the way that situations have affected you in the last week.

	Never (0%)	**Occasionally (1-33%)**	**Often (33-67%)**	**Usually (67-100%)**
Telephoning in public	☐	☐	☐	☐
Participating in small groups	☐	☐	☐	☐
Eating in public places	☐	☐	☐	☐
Drinking with others in public places	☐	☐	☐	☐
Talking to people in authority	☐	☐	☐	☐
Acting, performing, or giving a talk in front of an audience	☐	☐	☐	☐
Going to a party	☐	☐	☐	☐
Working while being observed	☐	☐	☐	☐
Writing while being observed	☐	☐	☐	☐
Calling someone you don't know very well	☐	☐	☐	☐
Talking with people you don't know very well	☐	☐	☐	☐

Meeting strangers	☐	☐	☐	☐
Urinating in a public bathroom	☐	☐	☐	☐
Entering a room when others are already seated	☐	☐	☐	☐
Being the centre of attention	☐	☐	☐	☐
Speaking up at a meeting	☐	☐	☐	☐
Taking a test	☐	☐	☐	☐
Expressing a disagreement or disapproval to people you don't know very well	☐	☐	☐	☐
Looking at people you don't know very well in the eyes	☐	☐	☐	☐
Giving a report to a group	☐	☐	☐	☐
Trying to pick up someone	☐	☐	☐	☐
Returning goods to a store	☐	☐	☐	☐
Giving a party	☐	☐	☐	☐
Resisting a high-pressure salesperson	☐	☐	☐	☐

Please write any feedback or comments you have about this research here. This may include:
• The experience of taking the questionnaire and how we could improve the process for future research.
• Ideas for future research within the topic of camouflaging in autism.
• Any other comments or experiences you feel it would be helpful for us to know.

_____
_____

_____
_____

Where did you hear about this study?

☐ Facebook
☐ Reddit
☐ Other social media
☐ Third-sector charity organisation
☐ Friends or family
☐ Prefer not to say

Appendix I

Participant Information Sheet

Doctorate in Clinical Psychology

Faculty of Medicine and Health Sciences

University of East Anglia

Participant Information Sheet

Identifying potential moderators on the impact of camouflaging on autistic adults.

Thank you for your interest in this research. Before you decide whether to take part, please read the following information carefully. You may contact the researchers if you have any questions and if you would like more information.

What is the purpose of this study?

Autistic people often report using camouflaging behaviours to hide their autistic traits and fit into social situations. Whilst this is sometimes helpful in making friends and finding employment, the benefits are significantly outweighed by the negative impact that camouflaging can have. Camouflaging may delay being diagnosed with autism and impact on the ability to develop a sense of identity. It is also linked with increased mental health difficulties, such as depression, anxiety, social anxiety, and suicidality. Much of the information known about the impact of camouflaging has been described by the autistic community (qualitatively) but we have not yet measured this impact (quantitative), and therefore, do not yet know the nature of the impact of camouflaging and how the related factors interact. Therefore, this study aims to measure, and establish the nature of, the relationships between age of autism diagnosis, camouflaging behaviours, and the impact of camouflaging in autistic adults.

Who can take part?

To take part in this research, you need to be aged 18 or over and have a diagnosis of autism.

Do I have to take part?

It is completely up to you whether or not you decide to take part in this study. If you do decide to take part, you will be asked to read a consent form, and after agreement you can continue onto the questionnaire. Agreeing to join the study does not mean that you have to complete it. You are free to withdraw at any stage without giving a reason.

What will happen if I agree to take part?

If you agree to take part, a questionnaire will follow for you to complete. This will involve creating a unique code and answering questions on demographic information, autistic traits, camouflaging behaviours, depression and anxiety, social anxiety, and self-concept clarity. There are no right or wrong answers, and all responses will be anonymous and stored securely. After completion of the questionnaires, you will be provided with a debrief form concerning the study and how you can obtain further information.

How long will my part in the study take?

If you decide to take part in this study, the questionnaire will last for approximately 20 to 30 minutes.

What are the possible disadvantages, risks or side effects of taking part?

There is the potential that some questions may ask about sensitive information that you may find upsetting, such as your mental health.

For more autism-related information and support, please visit the **National Autistic Society** online at https://www.autism.org.uk/

If you feel in distress and need to talk with someone urgently, please contact:

- the **Samaritans** by calling **116 123** for FREE 24/7, email jo@samaritans.org for a reply within 24 hours, or visit online at https://www.samaritans.org/.
- the Shout Crisis Text Line by texting **"SHOUT" to 85258** or visit online at https://giveusashout.org/.

What are the possible benefits of taking part?

Taking part will expand on the current literature and allow for a greater understanding of camouflaging in autistic adults. This will help in developing a conceptual model of the impact of camouflaging, providing support for autistic adults post-diagnosis, and identifying autism in undiagnosed adults.

How will the information be stored?

All data collected during the study will be anonymised prior to storage using a unique code, and all information will be stored securely using password protection. All data will only be accessible by members of the research team and academic staff revieing the project.

How will the data be used?

Data collected from this study will be analysed and written up by a Trainee Clinical Psychologist for their doctoral thesis on the Doctorate in Clinical Psychology. It may also be published in journals and presented at conferences if deemed appropriate. The collected (non-identifiable) data may also be used in future research projects.

What happens if I agree to take part, but change my mind later?

If you no longer wish to take part in the study at any point before analysis of the data has started, you have the right to withdraw from the study without giving any reason. Your data will be destroyed and will not be included in the final report. If you wish to withdraw, email the researcher with your unique code and inform them of your decision. Although participants should note that withdrawal of data will not be possible after analysis of the data and publication of the research.

Who has reviewed this study?

This study has been reviewed by:

The University of East Anglia (UEA) Faculty of Medicine and Health Sciences Research Ethics Subcommittee (FMH S-REC).

Application ID: **ETH2324-0006**

Who can I contact if I have any questions?

If you would like further information or would like to discuss any details personally, please get in touch with me by email:

Clarissa Osborne

clarissa.osborne@uea.ac.uk

(Student Researcher, Doctorate in Clinical Psychology, UEA)

Thank you very much for reading this information and giving consideration to taking part in this study.

Please click here to download a copy of this information sheet as a pdf Participant Information Sheet

---

clarissa.osborne@uea.ac.uk

If you would like further information or would like to discuss any details personally, please get in touch with me by email:

Clarissa Osborne

clarissa.osborne@uea.ac.uk

(Student Researcher, Doctorate in Clinical Psychology, UEA)

Although we hope it is not the case, if you have any complaints or concerns about any aspect of this study, please contact:

Professor Sian Coker

s.coker@uea.ac.uk

Appendix J

Participant Consent Form

Doctorate in Clinical Psychology

Faculty of Medicine and Health Sciences

Participant Consent Form

Identifying potential moderators on the impact of camouflaging on autistic adults.

By proceeding with the questionnaire, you confirm your agreement with the following:

1. You have read and understand the information sheet for the study. You have had the opportunity to consider the information and ask questions.
2. Your participation is voluntary, and you are free to withdraw at any time (prior to data analysis) without giving any reason and without it affecting you at all.
3. Your personal information will not be shared outside of the research team or published in the final report from the study.
4. The data collected will be anonymised and stored securely using password protection.
5. Your non-identifiable data may be used in future research projects.
6. You consent to take part and for your data to be used in academic research and for publications.

If you understand all of the above and would like to proceed with the questionnaire, **please click to proceed with the survey.**

Appendix K

Participant Debrief Sheet

Doctorate in Clinical Psychology

Faculty of Medicine and Health Sciences

University of East Anglia

Participant Debrief

Identifying potential moderators on the impact of camouflaging on autistic adults.

Thank you for participating in this study. Your time and efforts are much appreciated.

This study used a series of self-report questionnaires to explore the impact of camouflaging in autistic adults across different timings of diagnosis. The study aims to measure the impact of camouflaging on mental health (depression, anxiety, and social anxiety) and a sense of identity (self-concept clarity), and to explore whether there is a relationship with timing of autism diagnosis. This research will help in developing a conceptual model of the impact of camouflaging, providing support for autistic adults post-diagnosis, and identifying autism in undiagnosed adults.

This research is being conducted as part of the Doctorate in Clinical Psychology, with the aim of being published in an academic journal once completed. All data collected through the questionnaires will be securely stored and kept anonymous to ensure confidentiality of participants. No identifiable information will be collected and all data from the questionnaire responses will be stored under password protection. All participants have the right to withdraw their data from the study, even after completion of the questionnaire, and do not need a reason for doing so. Although participants should note that withdrawal of data will not be possible after analysis of the data and publication of the research.

There is the potential that discussing your experience of camouflaging and the impact this has had on you may be upsetting. For more autism-related information and support, please visit the **National Autistic Society** online at https://www.autism.org.uk/

If you feel in distress and need to talk with someone urgently, please contact:

- the **Samaritans** by calling **116 123** for FREE 24/7, email jo@samaritans.org for a reply within 24 hours, or visit online at https://www.samaritans.org/.
- the Shout Crisis Text Line by texting **"SHOUT" to 85258** or visit online at

https://giveusashout.org/.

If you would like any further information regarding the study, please feel free to get in touch with me by email:

Clarissa Osborne

clarissa.osborne@uea.ac.uk

(Student Researcher, Doctorate in Clinical Psychology, UEA)

Thank you again for your time and for contributing to this research.

Please click here to download a copy of this debrief sheet as a pdf Participant Debrief Sheet

Please click on the following link to request a copy of the findings upon completion of the research. This is separate from the data collection and will not affect your right to withdraw from the study. Your email address will be stored securely separately from the data collected within the study.

Click here

Appendix L

Ethical Approval

Decision - Ethics ETH2324-0006 : Miss Clarissa Osborne

From Ethics Monitor <no-reply@ethicsreview.uea.ac.uk>
Date Fri 27/10/2023 09:33
To Clarissa Osborne (MED - Postgraduate Researcher) <Clarissa.Osborne@uea.ac.uk>

University of East Anglia

Study title: Identifying potential moderators on the impact of camouflaging on autistic adults.

Application ID: ETH2324-0006

Dear Clarissa,

Your application was considered on 26th October 2023 by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee).

The decision is: **approved**.

You are therefore able to start your project subject to any other necessary approvals being given.

If your study involves NHS staff and facilities, you will require Health Research Authority (HRA) governance approval before you can start this project (even though you did not require NHS-REC ethics approval). Please consult the HRA webpage about the application required, which is submitted through the IRAS system.

This approval will expire on **31st March 2025**.

Please note that your project is granted ethics approval only for the length of time identified above. Any extension to a project must obtain ethics approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) before continuing.

It is a requirement of this ethics approval that you should report any adverse events which occur during your project to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) as soon as possible. An adverse event is one which was not anticipated in the research design, and which could potentially cause risk or harm to the participants or the researcher, or which reveals potential risks in the treatment under evaluation. For research involving animals, it may be the unintended death of an animal after trapping or carrying out a procedure.

Any amendments to your submitted project in terms of design, sample, data collection, focus etc. should be notified to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) in advance to ensure ethical compliance. If the amendments are substantial a new application may be required.

Approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) should not be taken as evidence that your study is compliant with the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018. If you need guidance on how to make your study UK GDPR compliant, please contact the UEA Data Protection Officer (dataprotection@uea.ac.uk).

Please can you send your report once your project is completed to the FMH S-REC (fmh.ethics@uea.ac.uk).

I would like to wish you every success with your project.

On behalf of the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee)

Yours sincerely,

Katie Chambers

Ethics ETH2324-0006 : Miss Clarissa Osborne

Decision - Ethics ETH2425-0021 (Significant amendments): Miss Clarissa Osborne

From Ethics Monitor <no-reply@ethicsreview.uea.ac.uk>
Date Tue 20/08/2024 14:12
To Clarissa Osborne (MED - Postgraduate Researcher) <Clarissa.Osborne@uea.ac.uk>

University of East Anglia

Study title: Identifying potential moderators on the impact of camouflaging on autistic adults.

Application ID: ETH2425-0021 (significant amendments)

Dear Clarissa,

Your amendment to your study was considered on 20th August 2024 by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee).

The decision is: **approved**.

You are therefore able to start your project subject to any other necessary approvals being given.

If your study involves NHS staff and facilities, you will require Health Research Authority (HRA) governance approval before you can start this project (even though you did not require NHS-REC ethics approval). Please consult the HRA webpage about the application required, which is submitted through the IRAS system.

This approval will expire on **31st March 2025**.

Please note that your project is granted ethics approval only for the length of time identified above. Any extension to a project must obtain ethics approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) before continuing.

It is a requirement of this ethics approval that you should report any adverse events which occur during your project to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) as soon as possible. An adverse event is one which was not anticipated in the research design, and which could potentially cause risk or harm to the participants or the researcher, or which reveals potential risks in the treatment under evaluation. For research involving animals, it may be the unintended death of an animal after trapping or carrying out a procedure.

Any amendments to your submitted project in terms of design, sample, data collection, focus etc. should be notified to the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) in advance to ensure ethical compliance. If the amendments are substantial a new application may be required.

Approval by the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee) should not be taken as evidence that your study is compliant with the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018. If you need guidance on how to make your study UK GDPR compliant, please contact the UEA Data Protection Officer (dataprotection@uea.ac.uk).

Please can you send your report once your project is completed to the FMH S-REC (fmh.ethics@uea.ac.uk).

I would like to wish you every success with your project.

On behalf of the FMH S-REC (Faculty of Medicine and Health Sciences Research Ethics Subcommittee)

Yours sincerely,

Dr Paul Linsley

Ethics ETH2425-0021 (Significant amendments): Miss Clarissa Osborne

Appendix M

Normality Testing

Table M1

Shapiro-Wilk Tests of Normal Distribution

	Statistic	df	p-Value
AQ-10	.897	185	<.001
CAT-Q	.902	185	<.001
Masking	.902	185	<.001
Compensation	.924	185	<.001
Assimilation	.946	185	<.001
SCCS	.945	185	<.001
PHQ-9	.969	185	<.001
GAD-7	.955	185	<.001
LSAS	.990	185	.240
Age of diagnosis	.987	184	.093
Age of identification	.984	181	.040
Time since diagnosis	.667	182	<.001

Note. AQ-10 = Autism Quotient, CAT-Q = Camouflaging Autistic Traits Questionnaire, SCCS = Self-concept Clarity Scale, PHQ-9 = Patient Health Questionnaire, GAD-7 = General Anxiety Disorder scale, LSAS = Liebowitz Social Anxiety Scale

Figure M1

Histogram and Normal Q-Q Plot of AQ-10 Scores

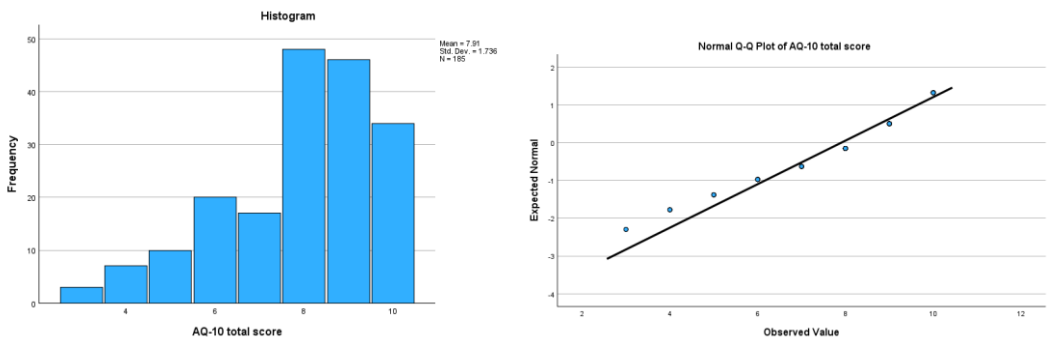


Figure M2

Histogram and Normal Q-Q Plot of CAT-Q Total Scores

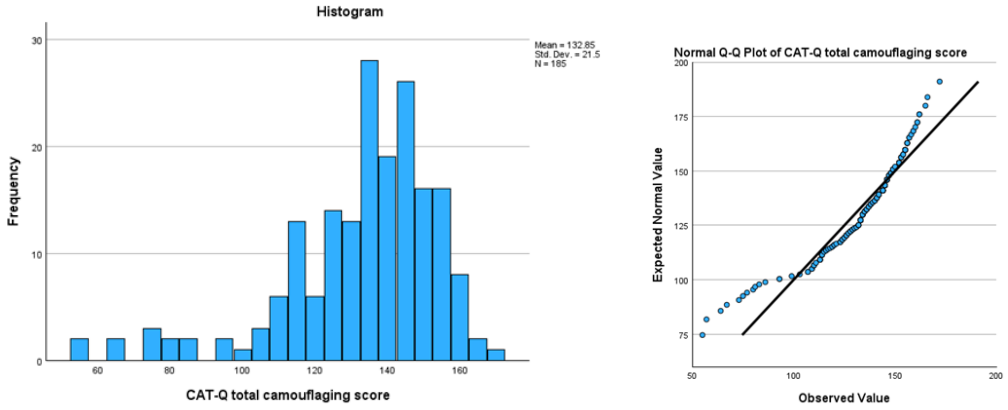


Figure M3

Histogram and Normal Q-Q Plot of SCCS Scores

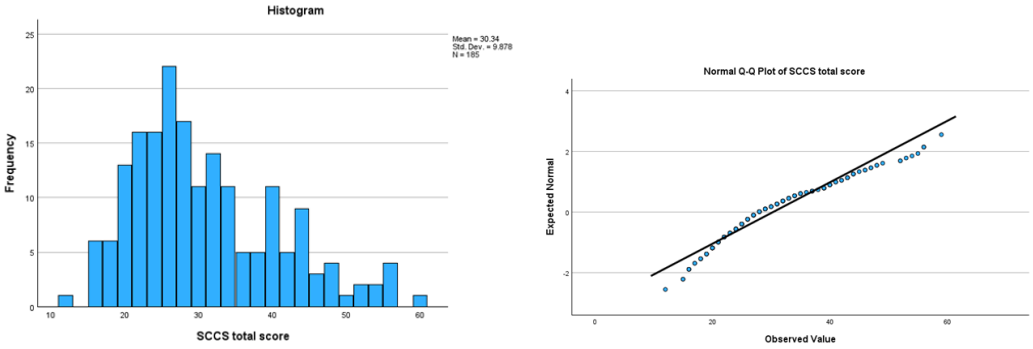


Figure M4

Histogram and Normal Q-Q Plot of PHQ-9 Scores

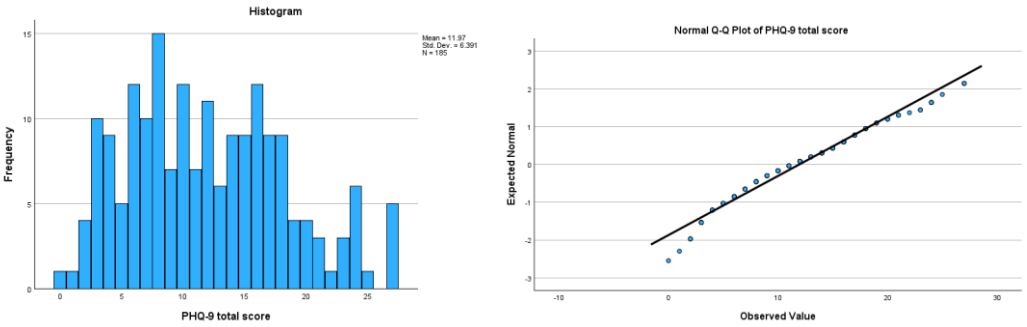


Figure M5

Histogram and Normal Q-Q Plot of GAD-7 Scores

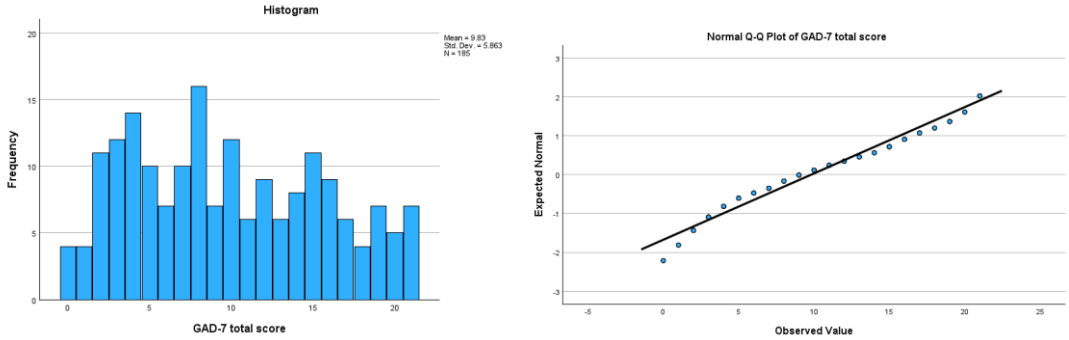


Figure M6

Histogram and Normal Q-Q Plot of LSAS Total Scores

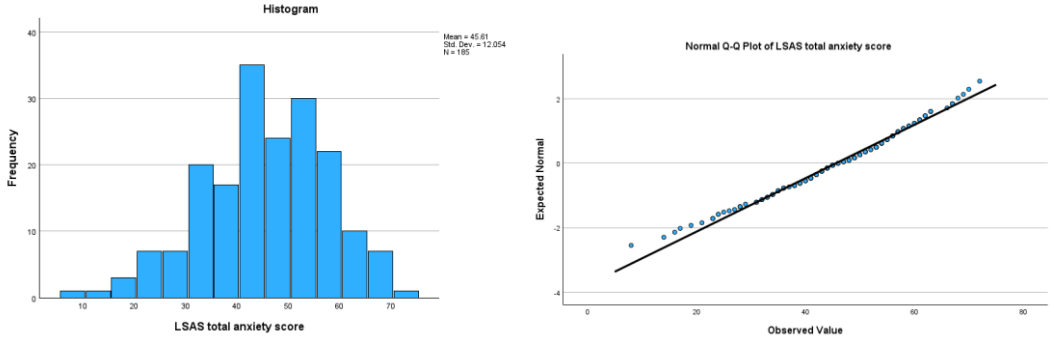


Figure M7

Histogram and Normal Q-Q Plot of Diagnosis Ages

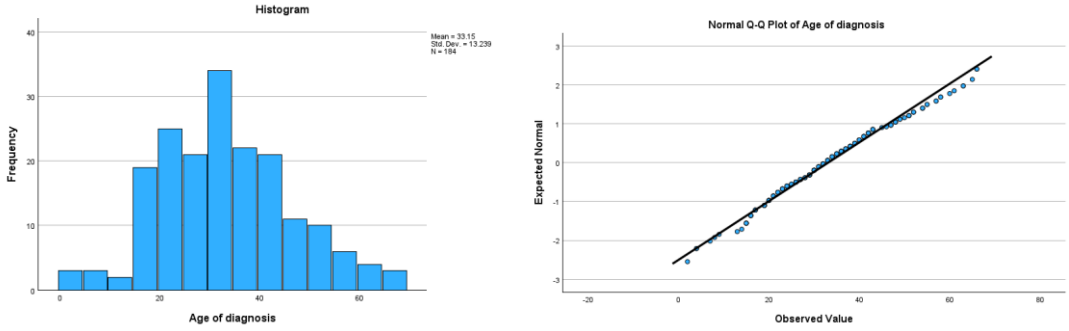


Figure M9

Histogram and Normal Q-Q Plot of CAT-Q Masking Scores

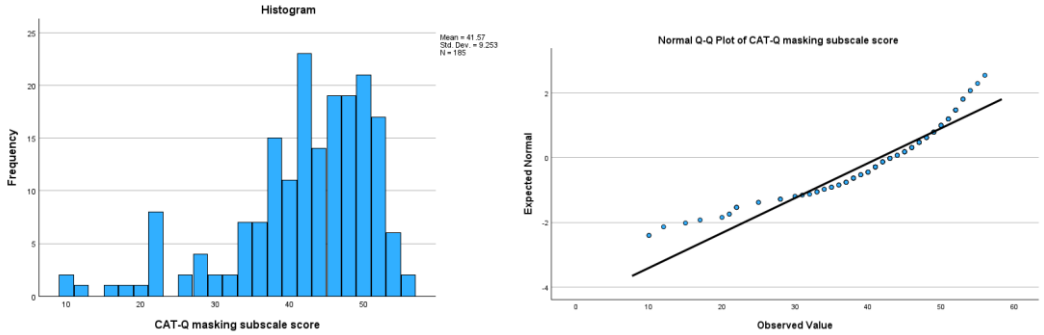


Figure M10

Histogram and Normal Q-Q Plot of CAT-Q Compensation Scores

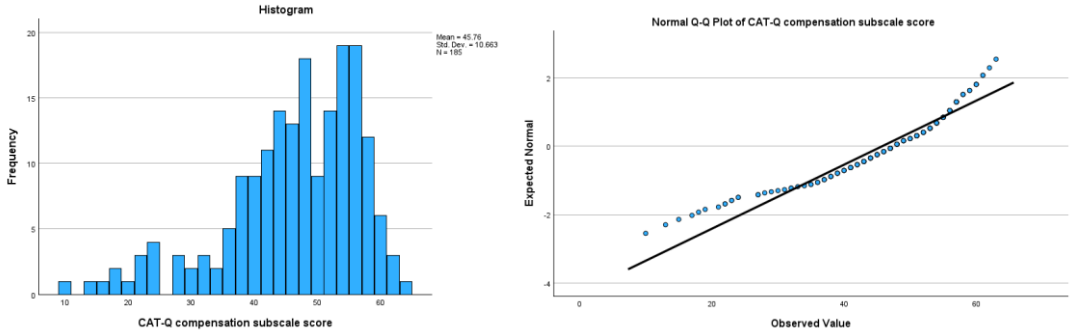


Figure M11

Histogram and Normal Q-Q Plot of CAT-Q Assimilation Scores

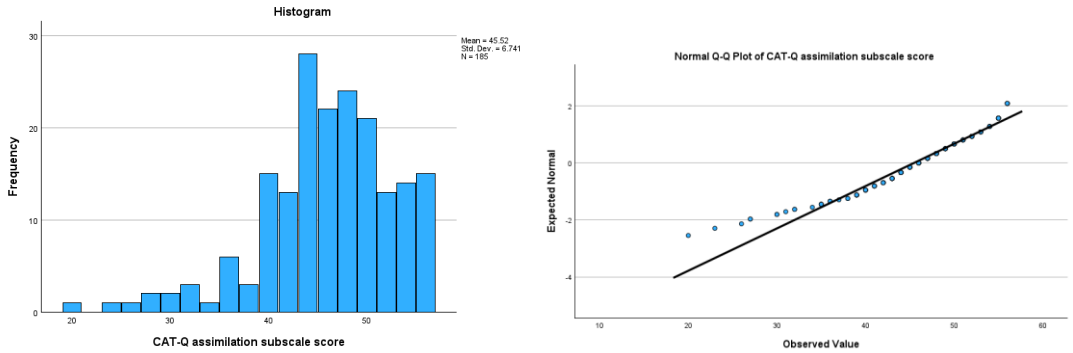
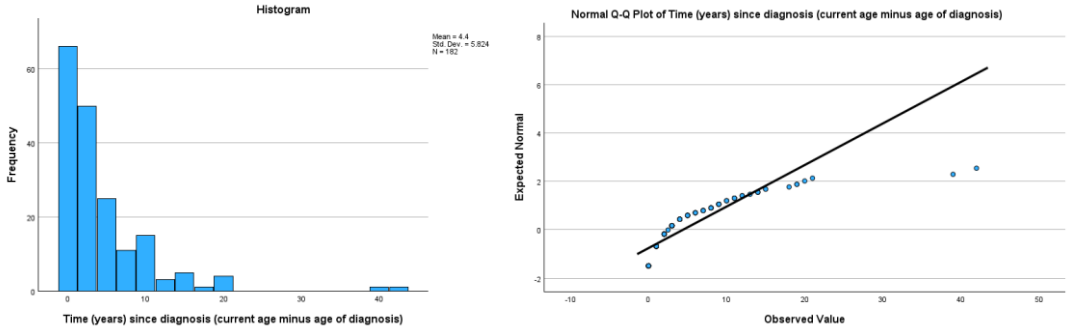


Figure M12

Histogram and Normal Q-Q Plot of Time Since Diagnosis



Appendix N

Bootstrapped Hierarchical Regression Analyses

Table N1

Hierarchical Regression Analyses of CAT-Q Scores using 95% Bias Corrected and Accelerated Confidence Intervals on 2000 Bootstrap Samples

	SCCS[a]		PHQ-9[b]		GAD-7[c]		LSAS[d]		Age of diagnosis[e]	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Block one										
(Constant)	24.403***	17.211, 31.710	12.681***	7.485, 17.822	13.388***	8.520, 17.926	89.810***	68.251, 112.327	-2.880	-7.800, 2.793
Age	.063	-.057, .191	-.033	-.113, .047	-.073*	-.141, .003	.104	-.195, .403	.985***	.908, 1.056
Gender diversity	.234	-2.880, 3.469	1.603	-.613, 3.731	1.025	-.930, 3.101	8.102	-1.009, 16.751	-.278	-2.479, 1.634
Country	2.025	-.884, 5.244	-.952	-3.003, 1.159	-1.341	-3.245, .457	-9.140*	-16.641, -1.904	-.326	-1.962, 1.252
Block two										
(Constant)	44.471***	32.279, 57.163	3.248	-6.355, 11.893	7.201	-1.364, 15.796	25.181	-6.938, 59.519	-5.827	-14.439, 2.742
Age	.045	-.069, .167	-.024	-.097, .050	-.067	-.132, .006	.163	-.136, .469	.987***	.911, 1.058
Gender diversity	.150	-2.810, 3.055	1.642	-.385, 3.668	1.051	-.829, 3.105	8.373*	.029, 16.040	-.268	-2.401, 1.612
Country	1.501	-1.435, 4.413	-.706	-2.772, 1.430	-1.180	-3.150, .760	-7.453*	-14.034, -1.003	-.246	-1.938, 1.362
CAT-Q	-.139***	-.217, -.057	.065*	.013, .124	.043	-.005, .087	.447***	.249, .635	.020	-.018, .063

***p <.001, **p <.01, *p <.05

[a] Block 1: R^2 = .017, Block 2: R^2 = .108, ΔR^2 = .091; [b] Block 1: R^2 = .023, Block 2: R^2 = .070, ΔR^2 = .047; [c] Block 1: R^2 = .046, Block 2: R^2 = .070, ΔR^2 = .024; [d] Block 1: R^2 = .045, Block 2: R^2 = .187, ΔR^2 = .142; [e] Block 1: R^2 = .805, Block 2: R^2 = .806, ΔR^2 = .001

Appendix O

Bootstrapped Moderation Analyses

Table O1

Moderator Effects of Gender Diversity and Age of Diagnosis between CAT-Q and SCCS, PHQ-9, and LSAS using 5000 Bootstrap Samples

		Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
Outcome	Predictors	*R*	R^2	β	SE	LLCI	ULCI
SCCS		.393	.155				
	(Constant)			**37.856**	6.401	25.833	50.875
	CAT-Q			**-.089**	.041	-.173	-.009
	Gender diversity[a]			**26.234**	10.700	1.159	43.640
	CAT-Q*Gender Diversity			**-.205**	.080	-.333	-.021
	Age			.034	.063	-.085	.161
	Gender[b]			.460	1.616	-2.796	3.588
	Country			1.559	1.502	-1.446	4.397
		.334	.112				
	(constant)			**43.331**	12.499	19.641	69.703
	CAT-Q			-.134	.092	-.316	.046
	Diagnosis age			-.100	.334	-.856	.494
	CAT-Q*Diagnosis age			-.000	.003	-.005	.005
	Age			.152	.158	-.108	.525
	Gender diversity			.075	1.599	-3.137	3.135
	Country			1.557	1.462	-1.384	4.317
PHQ-9		.346	.120				
	(Constant)			7.789	5.120	-2.966	17.160
	CAT-Q			.029	.032	-.029	.097
	Gender diversity			**-17.873**	7.078	-32.129	-4.450
	CAT-Q*Gender Diversity			**.126**	.050	.026	.219
	Age			-.026	.042	-.107	.057
	Gender			1.825	1.236	-.343	4.579
	Country			-.809	1.019	-2.790	1.146

		Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
Outcome	Predictors	*R*	R^2	β	SE	LLCI	ULCI
PHQ-9		.271	.074				
	(constant)			-.783	9.028	-19.124	16.503
	CAT-Q			.096	.070	-.030	.228
	Diagnosis age			.068	.239	-.375	.587
	CAT-Q*Diagnosis age			-.001	.002	-.005	.003
	Age			.025	.099	-.206	.187
	Gender diversity			1.624	1.025	-.331	3.718
	Country			-.778	1.022	-.2779	1.214
LSAS		.453	.205				
	(Constant)			**43.577**	17.894	10.057	80.207
	CAT-Q			**.417**	.113	.188	.630
	Gender diversity			-2.359	29.723	-68.410	47.898
	CAT-Q*Gender Diversity			.145	.215	-.214	.620
	Age			.195	.157	-.101	.513
	Gender			-5.000	4.016	-12.525	3.283
	Country			**-8.393**	3.484	-15.405	-1.699
		.450	.202				
	(constant)			71.711	39.555	-2.880	149.991
	CAT-Q			.083	.281	-.459	.635
	Diagnosis age			-1.447	.975	-3.221	.604
	CAT-Q*Diagnosis age			.011	.007	-.003	.025
	Age			.163	.405	-.829	.805
	Gender diversity			**8.561**	3.955	.549	16.077
	Country			**-6.947**	3.505	-14.002	-.489

Note. Coefficients are bolded where the 95% confidence intervals do not cross through zero.

[a] Gender diversity was dummy coded as cisgender and gender diverse; [b] Gender was coded as woman, man, and non-binary

Appendix P

Post-hoc Bootstrapped Hierarchical Regressions

Table P1

Hierarchical Regression Analyses of CAT-Q Subscales using 95% Bias Corrected and Accelerated Confidence Intervals on 2000 Bootstrap Samples

	SCCS[a]		PHQ-9[b]		GAD-7[c]		LSAS[d]		Age of diagnosis[e]	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Masking										
Block one										
(Constant)	24.403***	16.582, 31.867	12.681***	7.680, 18.161	13.388***	8.439, 17.953	89.810***	69.578, 111.527	-2.880	-7.547, 2.336
Age	.063	-.058, .186	-.033	-.111, .049	-.073	-.149, .013	.104	-.200, .403	.985***	.904, 1.054
Gender diversity	.234	-2.886, 3.620	1.603	-.647, 3.812	1.025	-.971, 3.070	8.102	-.401, 15.819	-.278	-2.685, 1.962
Country	2.025	-1.044, 4.806	-.952	-2.877, .967	-1.341	-3.153, .454	-9.140*	-16.296, -2.174	-.326	-1.991, 1.286
Block two										
(Constant)	40.904***	29.577, 53.064	8.957*	.943, 17.383	10.568**	2.750, 18.552	58.576***	28.679, 89.081	-7.836	-15.998, 1.092
Age	.048	-.072, .168	-.030	-.107, .051	-.070	-.145, .013	.131	-.176, .433	.989***	.908, 1.058
Gender diversity	-.373	-3.444, 2.602	1.740	-.531, 3.924	1.129	-.949, 3.179	9.250*	1.012, 17.273	-.097	-2.129, 1.883
Country	.982	-1.792, 3.628	-.717	-2.681, 1.236	-1.163	-3.042, .739	-7.166	-14.122, -.733	-.011	-1.749, 1.537
CAT-Q Mask	-.325***	-.489, -.153	.073	-.042, .180	.056	-.055, .158	.615**	.155, 1.063	.098	-.009, .203
Compensation										
Block one										
(Constant)	24.403***	16.982, 32.341	12.681***	7.262, 18.144	13.388***	8.371, 18.523	89.810***	67.975, 112.165	-2.880	-7.575, 2.072
Age	.063	-.056, .184	-.033	-.111, .045	-.073	-.140, .001	.104	-.215, .403	.985***	.901, 1.056
Gender diversity	.234	-3.238, 3.686	1.603	-.364, 3.499	1.025	-.836, 2.936	8.102	-.864, 16.456	-.278	-2.685, 1.853
Country	2.025	-1.147, 4.931	-.952	-2.881, .975	-1.341	-3.014, .210	-9.140*	-16.572, -2.044	-.326	-2.032, 1.212
Block two										
(Constant)	32.991***	24.239, 42.347	7.336*	.130, 14.339	9.843**	3.337, 16.537	61.947***	36.128, 91.237	-3.056	-9.465, 3.919
Age	.045	-.068, .157	-.022	-.100, .062	-.065	-.133, .011	.161	-.152, .461	.985***	.899, 1.060
Gender diversity	.461	-2.988, 3.770	1.461	-.359, 3.313	.931	-.841, 2.824	7.365	-1.473, 15.698	-.283	-2.686, 1.877
Country	1.983	-1.072, 4.767	-.926	-2.875, 1.101	-1.324	-3.016, .264	-9.003*	-15.922, -2.585	-.325	-2.029, 1.208
CAT-Q Comp	-.178*	-.326, -.032	.111*	.012, .218	.074	-.017, .162	.578**	.167, .945	.004	-.065, .072

	SCCS[a]		PHQ-9[b]		GAD-7[c]		LSAS[d]		Age of diagnosis[e]	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Assimilation										
Block one										
(Constant)	24.403***	16.825, 31.923	12.681***	7.625, 17.733	13.388***	8.695, 17.983	89.810***	69.305, 110.315	-2.880	-7.789, 2.512
Age	.063	-.047, .179	-.033	-.114, .045	-.073	-.144, .003	.104	-.210, .410	.985***	.908, 1.052
Gender diversity	.234	-3.009, 3.505	1.603	-.563, 3.866	1.025	-1.012, 3.033	8.102	-.416, 16.225	-.278	-2.581, 1.681
Country	2.025	-.867, 4.985	-.952	-3.138, 1.117	-1.341	-3.079, .410	-9.140*	-16.898, -1.068	-.326	-1.999, 1.298
Block two										
(Constant)	41.243***	29.616, 53.759	1.307	-7.890, 9.667	6.636	-2.162, 14.572	.268	-29.723, 29.356	-3.784	-12.021, 4.465
Age	.067	-.038, .173	-.036	-.109, .041	-.074*	-.147, .003	.080	-.186, .350	.984***	.908, 1.053
Gender diversity	.229	-2.802, 3.285	1.606	-.396, 3.770	1.027	-1.000, 3.012	8.129*	1.402, 14.885	-.279	-2.576, 1.688
Country	1.903	-1.003, 4.747	-.870	-2.936, 1.281	-1.293	-2.987, .512	-8.492**	-15.349, -1.562	-.318	-2.007, 1.349
CAT-Q Assim	-.369**	-.597, -.135	.249**	.090, .410	.148	-.011, .320	1.960***	1.485, 2.471	.020	-.101, .166

***p <.001, **p <.01, *p <.05

[a] Masking- Block 1: R^2 = .017, Block 2: R^2 = .106, ΔR^2 = .089; Compensation- Block 1: R^2 = .017, Block 2: R^2 = .054, ΔR^2 = .037; Assimilation- Block 1: R^2 = .023, Block 2: R^2 = .091, ΔR^2 = .067; [b] Masking- Block 1: R^2 = .023, Block 2: R^2 = .034, ΔR^2 = .011; Compensation- Block 1: R^2 = .023, Block 2: R^2 = .057, ΔR^2 = .034; Assimilation- Block 1: R^2 = .017, Block 2: R^2 = .108, ΔR^2 = .091; [c] Masking- Block 1: R^2 = .046, Block 2: R^2 = .153, ΔR^2 = .007; Compensation- Block 1: R^2 = .046, Block 2: R^2 = .063, ΔR^2 = .018; Assimilation- Block 1: R^2 = .046, Block 2: R^2 = .074, ΔR^2 = .028; [d] Masking- Block 1: R^2 = .045, Block 2: R^2 = .093, ΔR^2 = .048; Compensation- Block 1: R^2 = .045, Block 2: R^2 = .104, ΔR^2 = .059; Assimilation- Block 1: R^2 = .045, Block 2: R^2 = .314, ΔR^2 = .269; [e] Masking- Block 1: R^2 = .805, Block 2: R^2 = .810, ΔR^2 = .005; Compensation- Block 1: R^2 = .805, Block 2: R^2 = .805, ΔR^2 = .000; Assimilation- Block 1: R^2 = .805, Block 2: R^2 = .805, ΔR^2 = .000

Table P2

Hierarchical Regression Analyses of CAT-Q Scores using 95% Bias Corrected and Accelerated Confidence Intervals on 2000 Bootstrap Samples

	Time since diagnosis[a]	
	β	95% CI
Block one		
(Constant)	-2.880	-3.043, 8.128
Age	.015	-.060, .094
Gender diversity	.278	-1.500, 2.494
Country	.326	-1.207, 1.876
Block two		
(Constant)	5.827	-3.571, 14.332
Age	.013	-.066, .095
Gender diversity	.268	-1.565, 2.475
Country	.246	-1.328, 1.818
CAT-Q	-.020	-.062, .022

***p <.001, **p <.01, *p <.05

[b] Block 1: R^2 = .002, Block 2: R^2 = .008, ΔR^2 = .006

Appendix Q

Post-hoc Bootstrapped Moderation Analyses

Table Q1

Post-hoc Moderator Effects between CAT-Q (and subscales) and SCCS, PHQ-9, and LSAS using 5000 Bootstrap Samples

		Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
Outcome	Predictors	*R*	R^2	β	SE	LLCI	ULCI
SCCS		.355	.126				
	(Constant)			**37.215**	6.100	25.617	49.549
	CAT-Q Masking			**-.250**	.100	-.453	-.056
	Gender diversity[a]			9.653	8.200	-9.222	23.248
	CAT-Q Mask*Gender Diversity			-.248	.188	-.558	.180
	Age			.046	.065	-.080	.175
	Gender[b]			-.091	1.658	-3.366	3.243
	Country			1.224	1.545	-1.929	4.074
		.331	.109				
	(constant)			**40.864**	9.899	22.729	62.403
	CAT-Q Masking			-.338	.209	-.797	.056
	Diagnosis age			-.090	.275	-.732	.340
	CAT-Q Mask*Diagnosis age			.001	.006	-.010	.014
	Age			.116	.165	-.192	.476
	Gender diversity			-.419	1.617	-3.600	2.747
	Country			1.100	1.488	-1.902	3.956
		.306	.094				
	(Constant)			**29.181**	4.666	19.696	38.237
	CAT-Q Compensation			-.096	.076	-.242	.057
	Gender diversity			19.095	9.609	-1.695	36.031
	CAT-Q Comp*Gender Diversity			-.424	.194	-.762	.001
	Age			.042	.064	-.079	.175
	Gender			.592	1.811	-3.299	3.890
	Country			2.002	1.527	-1.037	4.937

Outcome	Predictors	Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
		R	R^2	β	SE	LLCI	ULCI
SCCS		.250	.063				
	(constant)			**31.426**	8.638	12.502	48.062
	CAT-Q Compensation			-.157	.186	-.505	.251
	Diagnosis age			-.116	.246	-.624	.359
	CAT-Q Comp*Diagnosis age			-.001	.005	-.011	.009
	Age			.189	.157	-.046	.574
	Gender diversity			.360	1.681	-3.029	3.526
	Country			2.026	1.519	-.995	4.979
		.362	.131				
	(Constant)			**35.153**	6.698	22.553	47.532
	CAT-Q Assimilation			-.225	.126	-.460	.035
	Gender diversity			**32.776**	12.678	5.203	55.190
	CAT-Q Assim*Gender Diversity			**-.721**	.262	-1.182	-.152
	Age			.064	.060	-.054	.181
	Gender			-.096	1.708	-3.436	3.268
	Country			1.912	1.505	-1.104	4.827
		.292	.085				
	(constant)			**40.460**	14.904	13.468	72.868
	CAT-Q Assimilation			-.364	.322	-1.041	.245
	Diagnosis age			-.138	.390	-1.067	.507
	CAT-Q Assim*Diagnosis age			.000	.008	-.014	.019
	Age			.201	.163	-.059	.581
	Gender diversity			.153	1.622	-3.024	3.278
	Country			1.929	1.520	-1.160	4.739
		.334	.112				
	(Constant)			**43.830**	8.531	27.977	61.468
	CAT-Q			**-.138**	.058	-.253	-.025
	Time since diagnosis			.033	.987	-1.813	2.125
	CAT-Q*Time since diagnosis			.001	.008	-.015	.015
	Age			.047	.059	-.068	.165
	Gender diversity			.086	1.621	-3.140	3.227
	Country			1.563	1.483	-1.376	4.432

Outcome	Predictors	Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
		R	R^2	β	SE	LLCI	ULCI
PHQ-9		.253	.064				
	(Constant)			**11.105**	4.581	2.039	19.836
	CAT-Q Masking			-.021	.072	-.117	.162
	Gender diversity			-7.691	5.171	-18.317	2.069
	CAT-Q Mask*Gender Diversity			.149	.114	-.081	.369
	Age			-.036	.043	-.122	.050
	Gender			2.082	1.227	-.134	4.737
	Country			-.953	1.076	-3.086	1.141
		.198	.039				
	(constant)			5.180	6.688	-6.400	20.159
	CAT-Q Masking			.170	.141	-.152	.402
	Diagnosis age			.070	.173	-.313	.383
	CAT-Q Mask*Diagnosis age			-.003	.004	-.010	.006
	Age			.023	.107	-.236	.186
	Gender diversity			1.693	1.086	-.437	3.885
	Country			-.867	1.071	-2.928	1.285
		.356	.127				
	(Constant)			**10.664**	3.406	3.873	17.189
	CAT-Q Compensation			.031	.054	-.071	.141
	Gender diversity			**-17.348**	4.900	-27.322	-8.134
	CAT-Q Comp*Gender Diversity			**.348**	.095	.157	.530
	Age			-.026	.043	-.111	.058
	Gender			1.634	1.278	-.648	4.391
	Country			-.934	.997	-2.891	1.041
		.248	.062				
	(constant)			3.169	6.712	-9.939	16.371
	CAT-Q Compensation			.202	.132	-.061	.458
	Diagnosis age			.087	.182	-.284	.432
	CAT-Q Comp*Diagnosis age			-.003	.004	-.009	.005
	Age			.009	.101	-.210	.183
	Gender diversity			1.457	1.050	-.565	3.504
	Country			-.973	1.013	-3.007	.967

Outcome	Predictors	Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
		R	R^2	β	SE	LLCI	ULCI
PHQ-9		.361	.130				
	(Constant)			4.399	4.947	-6.004	13.527
	CAT-Q Assimilation			-.173	.097	-.011	.366
	Gender diversity			**-16.588**	7.854	-31.090	-.391
	CAT-Q Assim*Gender Diversity			.330	.165	-.012	.635
	Age			-.042	.041	-.119	.042
	Gender			2.042	1.225	-.316	4.538
	Country			-.953	1.011	-2.951	1.023
		.303	.092				
	(constant)			-.883	9.771	-20.589	17.346
	CAT-Q Assimilation			.297	.212	-.109	.722
	Diagnosis age			.026	.236	-.384	.555
	CAT-Q Assim*Diagnosis age			-.001	.006	-.013	.009
	Age			-.003	.101	-.227	.169
	Gender diversity			1.598	1.011	-.355	3.671
	Country			-.899	1.002	-2.869	1.131
		.280	.078				
	(Constant)			6.212	6.250	-7.757	16.723
	CAT-Q			.044	.039	-.022	.129
	Time since diagnosis			-.535	.669	-1.754	.844
	CAT-Q*Time since diagnosis			.004	.005	-.006	.014
	Age			-.036	.041	-.114	.049
	Gender diversity			1.729	1.020	-.222	3.795
	Country			-.701	1.017	-2.681	1.307
LSAS		.320	.101				
	(Constant)			**77.970**	16.664	45.984	110.871
	CAT-Q Masking			.486	.289	-.093	1.032
	Gender diversity			1.303	21.451	-42.130	41.435
	CAT-Q Mask*Gender Diversity			.325	.482	-.564	1.309
	Age			.156	.166	-.171	.484
	Gender			-3.227	4.248	-10.805	5.767
	Country			**-8.378**	3.820	-15.918	-1.253

Outcome	Predictors	Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
		R	R^2	β	SE	LLCI	ULCI
LSAS		.322	.104				
	(constant)			**83.075**	29.012	29.465	142.526
	CAT-Q Masking			-.044	.620	-1.286	1.158
	Diagnosis age			-.939	.756	-2.219	.734
	CAT-Q Mask*Diagnosis age			.022	.018	-.013	.056
	Age			.171	.387	-.748	.795
	Gender diversity			**9.664**	4.191	1.180	17.841
	Country			-6.300	3.842	-13.825	1.244
		.349	.122				
	(Constant)			**75.850**	14.058	49.654	104.615
	CAT-Q Compensation			.583	.225	-.114	1.003
	Gender diversity			7.547	21.885	-40.853	44.526
	CAT-Q Comp*Gender Diversity			.179	.413	-.566	1.093
	Age			.188	.167	-.157	.499
	Gender			-5.278	4.312	-13.064	3.934
	Country			**-10.078**	3.678	-17.414	-2.915
		.337	.114				
	(constant)			**91.028**	29.665	33.643	147.506
	CAT-Q Compensation			-.061	.577	-1.136	1.108
	Diagnosis age			-.772	.747	-2.150	.790
	CAT-Q Comp*Diagnosis age			.019	.015	-.012	.047
	Age			.095	.416	-.972	.700
	Gender diversity			7.457	4.294	-1.303	15.504
	Country			**-8.896**	3.636	-16.317	-2.131
		.587	.344				
	(Constant)			20.648	15.898	-11.919	50.698
	CAT-Q Assimilation			**1.791**	.285	1.260	2.375
	Gender diversity			-26.048	28.327	-79.238	30.435
	CAT-Q Assim*Gender Diversity			.911	.599	-.265	2.054
	Age			.113	.143	-.177	.391
	Gender			-3.949	3.321	-10.018	3.069
	Country			**-9.248**	3.219	-15.954	-3.185

Outcome	Predictors	Model Summary		Bootstrapped Coefficient, SE, and BCa 95% CI			
		R	R^2	β	SE	LLCI	ULCI
LSAS		.563	.317				
	(constant)			-.711	33.413	-61.442	70.550
	CAT-Q Assimilation			**1.969**	.678	.528	3.252
	Diagnosis age			-.049	.871	-1.993	1.545
	CAT-Q Assim*Diagnosis age			.000	.018	-.030	.043
	Age			.120	.398	-.867	.749
	Gender diversity			**9.006**	3.520	1.112	15.165
	Country			**-8.304**	3.304	-14.889	-2.044
		.486	.237				
	(Constant)			-9.355	16.830	-44.671	21.163
	CAT-Q			**.688**	.104	.502	.914
	Time since diagnosis			**6.380**	2.343	1.919	11.049
	CAT-Q*Time since diagnosis			**-.048**	.018	-.086	-.015
	Age			.270	.143	-.014	.550
	Gender diversity			7.388	3.926	-.498	15.081
	Country			**-7.838**	3.464	-14.925	-1.414

Note. Coefficients are bolded where the 95% confidence intervals do not cross through zero.

[a] Gender diversity was dummy coded as cisgender and gender diverse.

[b] Gender was coded as woman, man, and non-binary.