Brief report: Does autistic community connectedness moderate the relationship between masking and wellbeing?

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Running title: Masking, wellbeing and autistic community

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Abstract

Background: Masking involves blending in or covering a stigmatised identity, to avoid discrimination and to ‘pass’ within society. Autistic people often report masking, both intentionally and unintentionally, to get by in social situations. Autistic people who report high rates of masking also tend to experience poorer mental health. It is important we understand whether there are variables which can protect against the negative effects of masking. One such potential variable is autistic community connectedness – being part of and belonging to the autistic community. Past research suggests there are benefits for autistic people socially connecting with other autistic people. We investigated whether autistic community connectedness could moderate the relationship between masking and wellbeing.

Methods: One hundred and ninety-six autistic people completed an online survey including measures of autistic community connectedness, masking and mental wellbeing. We used moderation analysis to test whether autistic community connectedness acted as a buffer between masking and wellbeing.

Results: Higher self-reported masking related to poorer mental wellbeing. Higher autistic community connectedness related to more positive wellbeing. Higher autistic community connectedness correlated with more masking. However, there was no interaction effect, and autistic community connectedness did not moderate the relationship between masking and wellbeing.

Conclusions: Although autistic community connectedness did relate to more positive mental wellbeing overall, it did not moderate the negative relationship between masking and wellbeing. If masking relates to the prejudice faced by autistic people, those with greater attachment to the autistic community may also be more aware of discrimination against their community. Further, autistic people who are more connected might experience a higher salience of masking when moving between autistic and non-autistic settings. Tackling prejudice towards autistic people is critical in helping to reduce the negative effects associated with masking, and we must endeavour to change perceptions and increase inclusion of autistic people.
Community brief

Why is this an important issue?

Lots of autistic people say that they often have to ‘mask’ the fact they are autistic. This means they might (on purpose or by accident) use strategies like planning a social script before meeting someone, trying to hide their stims, or forcing themselves to use eye contact because non-autistic people expect this. Previous research has shown that the more someone masks, the more they experience poor mental health and wellbeing. We wondered whether feeling connected to the autistic community (“autistic community connectedness”) could help protect autistic people from these negative masking outcomes, because many autistic people talk about how they get joy out of being part of this community.

What was the purpose of this study?

We aimed to see whether autistic community connectedness could play a role in protecting autistic people against the negative effects of masking on mental wellbeing.

What did the researchers do?

We used an online survey which included questions about masking, connectedness to the autistic community, and mental wellbeing. One hundred and ninety-six autistic people completed the survey. We used an analysis called ‘moderation analysis’ which can be used to see if something is acting like a buffer or protector between two things (in this case, masking and wellbeing).

What were the results of the study?

Although people with higher autistic community connectedness generally had more positive mental wellbeing overall, we found that community connectedness was not acting like a protector. In other words, masking still related to poorer wellbeing, even when someone had high autistic community connectedness.

What do these findings add to what was already known?

Our findings show that autistic community connectedness can be something positive for mental wellbeing, but we think that masking keeps happening because there is so much stigma and prejudice towards autistic people. It’s difficult for autistic people to “take the mask off”, and people who are more connected to the autistic community may be even more aware of the prejudice and discrimination experienced by the autistic community. Our findings provide further support for the idea that masking has a lot to do with experiences of stigma.

What are potential weaknesses in the study?

Our participants were mostly female, and we recruited them via online communities. There may already be high feelings of autistic community connectedness in these participants, so our findings won’t be the same for everyone, and it would be useful to have more people who actively reject being part of the autistic community within studies like ours, as well as having more diverse participants involved.

How will these findings help autistic adults now or in the future?
We show that autistic community connectedness is related to wellbeing, and we need to support autistic people to feel like they can freely explore this community and decide whether they want to get involved or not. If we want to help autistic people mask less, we really need to work harder on creating societies that are open to authentically autistic people.
Background

‘Masking’ (sometimes called ‘camouflaging’) is an experience frequently reported for many autistic people within multiple different contexts. 1–4 Masking involves blending in with the neurotypical majority, using intentional or unintentional ways to get by in social situations – such as developing scripts for conversations, suppressing stimming, or forcing oneself to make eye contact. 5,6 Due to ongoing conceptual discussions, 6,7 we use the term masking in this paper, to respect the term which the autistic community tends to use most often. 4

While many people, including autistic people, will try to maintain a positive reputation, 8 masking goes beyond everyday reputation management as it involves the concealment of a stigmatised identity, and presenting as though one does not have that identity. Although there may be unique aspects of autistic masking, 6 similar experiences have been reported for other people with different stigmatised identities or experiences, for example, people who stutter, 9 people with social anxiety, 10–12 chronic pain, 13 chronic illness, 14,15 and sexual and gender minorities. 16,17 Masking may persist due to the prejudice these groups experience in society. 18 Masking of a stigmatised identity has a detrimental effect on wellbeing - a recent systematic review of the autism literature highlighted that masking relates to poorer mental health, 3 with higher rates of masking related to greater depression, 5,19,20 anxiety, 22,20 social anxiety, 20 suicidality, 21 and more broadly psychological distress 22, and poorer mental wellbeing. 5 Given these findings, we must try to understand if there are ways of protecting against the negative relationship between masking and wellbeing.

One potential variable that could play a protective role is autistic community connectedness (ACC). We can think of ACC in terms of three components: having a sense of belonging and shared experiences with the autistic community, being socially connected to other autistic people, and advocating for this community (political connectedness). 23 Previous work has described how autistic people build invisible infrastructures of support for each other in an often hostile society, confounding the notion of autism as a strictly social, communicational deficit. 24 Autistic communities exist in many forms, where autistic sociality can flourish. 24,25 Further, greater ACC may act as a buffer between minority stress and mental health, ameliorating against the stress associated with having a stigmatised minority identity. 26 Other research has looked at related concepts, such as autistic identity, whereby someone feels that being autistic is part of who they are (personal identity) or they identify as being like other autistic people (social identity). A strong sense of autistic personal and/or social identity relates to more positive wellbeing and self-esteem. 27–29 Other studies show how autistic people derive joy from friendships with other autistic people 30 and experience good rapport together. 31 Given these potential benefits for wellbeing, it is worth investigating whether ACC can buffer against the negative impacts of masking. This study therefore aimed to examine whether ACC moderated the relationship between masking and mental wellbeing.

Methods

Participants

In total, 196 autistic people took part in the study. The mean age was 32.47 (SD=11.15, range 18-67). Participants could write their gender identity in an open textbox - most identified as female (63.3%; see Table 1). Most self-reported a formal autism diagnosis (n=129, 65.8%), with 35 currently seeking a diagnosis (17.9%), 27 self-identifying but not seeking a diagnosis.
(13.8%), and five preferred not to say (2.6%). All participants scored above 14 on the Ritvo Autism and Aspergers Diagnostic Scale (RAADS-14) \(^{32}\) mean=32.71, \(SD=6.17\), range 14–42). Most preferred identity-first language \((n=136, 69.4\%)\), or had no preference \((n=46, 23.5\%)\), with fewer preferring person-first language \((n=14, 7.1\%)\). We present other demographic information in Table 1, with most participants White, from the UK, in employment and educated to degree level. We recruited participants via adverts on Facebook, Twitter, Instagram, and via autism organisations, community groups and charities. Recruitment took place in June 2021. We obtained ethical approval from the University of Stirling General University Ethics Panel Delegated Authority and all participants gave informed consent before starting the study.

[Insert Table 1 here]

**Materials & Procedure**

Participants completed an online survey, presented using ‘Qualtrics’. The survey took 12 minutes to complete on average, and participants first answered demographic questions (e.g., age, gender) and then the following measures:

**Ritvo Autism and Aspergers Diagnostic Scale (RAADS-14)\(^{32}\)** We used this measure as a brief screen to confirm self-reported diagnosis or identification among participants. This measure has adequate sensitivity for detecting self-reported autistic traits.\(^{33}\) Participants rated 14 statements on a 4-point scale (0 ‘never true’ to 3 ‘true now and when I was young’), related to different autistic characteristics, such as social communication and sensory sensitivities. A score of 14 or above suggests an autism diagnosis may be likely, with a total score ranging between 0 and 42. Internal consistency was acceptable (Cronbach’s \(\alpha=.66\)).

**Autistic Community Connectedness (ACC)\(^{26}\)** We used this measure to determine how connected to the autistic community each participant felt. Participants read ten statements and rated their agreement on a 6-point Likert scale (1, ‘strongly disagree’ to 6, ‘strongly agree’), for example, “I feel a sense of belonging to the autistic community”. Total scores could range from 10 to 60, with higher scores reflecting greater connectedness. Internal consistency was very good (\(\alpha=.91\)).

**Camouflaging Autistic Traits Questionnaire (CATQ).\(^5\)** We used this measure to establish how much participants reported intentionally using masking behaviours. The original measure uses the term “camouflaging” with three subscales titled “masking”, “assimilation” and “compensation”. We used the overall total score and refer to this as “masking” in this paper to align with the preferences of the autistic community.\(^4,6,7\) Participants rated 25 items on a 7-point Likert scale (1, ‘strongly disagree’ to 7, ‘strongly agree’), such as “I have developed a script to follow in social situations”. Total scores ranged from 25 to 175, with higher scores indicating more masking. Internal consistency was very good (\(\alpha=.88\)).

**Warwick Edinburgh Mental Wellbeing Scale (WEMWBS).\(^{34}\)** We used the WEMWBS to measure current mental wellbeing. We selected this measure as all items are positively worded, and potentially less distressing (however, we still directed participants to sources of support at the end of the study). There are 14 items (e.g., “I’ve been feeling cheerful”), with participants responding on a 5-point Likert scale (1, ‘none of the time’ to 5, ‘all of the time’). Total scores ranged from 14 to 70, with higher scores indicating more positive wellbeing. To
the best of our knowledge the measure has not been validated for autistic adults, but prior studies indicate excellent internal consistency which we also noted ($\alpha = .92$).

**Design and data analysis**

This study had a cross-sectional survey design, and we analysed data using SPSS (Version 27) with the PROCESS add-on for moderation analysis. CAT-Q scores were the independent variable, WEMWBS the dependent variable, and ACC the moderator. For moderation, we mean-centred the variables to avoid potential multicollinearity with the interaction term. Although our research team is neurodivergent, due to funding limitations (this study was RCs Masters’ dissertation), we could only pay an autistic non-researcher at the start of the study to discuss the relevance of the topic to the autistic community and gather their feedback on the questionnaire. They indicated the topic was relevant and the questionnaire was accessible.

**Results**

Overall, the mean CAT-Q score was 131.62 ($SD=19.30$; range 73-171), mean WEMWBS score was 39.16 ($SD=9.76$, range 14-67), and mean ACC score was 41.34 ($SD=10.67$, range 15-60). Masking and wellbeing were significantly negatively correlated ($r= -.19$, $p=.009$) and ACC and wellbeing were positively correlated at a marginal significance threshold ($r= .14$, $p=.047$). ACC and masking were significantly positively correlated ($r= .20$, $p=.005$).

In the moderation analysis, the overall model was significant ($R^2=.07$, $F(3, 192)=4.67$, $p<.001$). There was a significant positive relationship between ACC and wellbeing ($b=.17$, $p=.009$, 95% Confidence Intervals (CI)[.04, .30]). There was a significant negative relationship between masking and wellbeing ($b= -.11$, $p=.002$, CI[-.18, -.04]). However, there was no significant interaction effect ($b=.0002$, $p=.96$, CI[-.01, .01]), indicating no moderation was occurring. The interaction plot (Figure 1) shows that when masking is lower, wellbeing is higher - and those with higher ACC have the most positive wellbeing compared to those with medium or low ACC. As masking increases, wellbeing decreases, and although those with high ACC still have higher wellbeing, the negative relationship between masking and wellbeing still happens – therefore ACC is not acting as a moderator.

[Figure 1 here]

**Discussion**

We aimed to investigate the relationship between masking, mental health, and autistic community connectedness. We hypothesised that higher masking would predict poorer mental health, while ACC may moderate this relationship. As expected, higher masking predicted poorer mental wellbeing, and although higher ACC related to more positive wellbeing, it did not moderate (buffer) against the negative relationship between masking and wellbeing.

There are several potential reasons why we found no moderating effect of ACC. The negative relationship between masking and wellbeing may be difficult to change because it relates to the stigmatisation of autistic people. Masking may happen due to the stigma society attaches to being autistic, given that masking is a strategy often employed to avoid marginalisation, prejudice and victimisation. Prejudice towards autistic people manifests itself in many ways, for example, in rapid, negative biases when non-autistic people form first impressions.
of autistic people.\textsuperscript{37} Even when autistic people report that they are masking, non-autistic people still generate negative first impressions.\textsuperscript{38} Stigmatising another group involves seeing that group as “other”, fundamentally different, and sometimes as less than human, and we see this dehumanisation not only amongst the general public,\textsuperscript{39} but within autism research itself.\textsuperscript{40} Prejudice against autistic people is therefore systemic, and even strong community connections may be unable to buffer against this. If trying to mitigate against the negative impacts of masking, we need to create societal level change. This change is possible – research has shown how training can improve non-autistic people’s attitudes\textsuperscript{41} and behavioural intentions.\textsuperscript{42} Reducing the ‘double empathy problem’ – mutual misunderstandings between different groups – may also help improve rapport and understanding between autistic and non-autistic people.\textsuperscript{43}

Since higher ACC was related to higher wellbeing overall, this finding shows that ACC still has benefits, and we should find ways to support autistic people to access and explore the autistic community. Previous research has focused on a social identity approach, and the benefits of a positive autistic identity for wellbeing, showing how stronger autistic social identity may act as a buffer against poor mental health,\textsuperscript{27} more pride in being autistic relates to higher self-esteem\textsuperscript{29} and generally how greater social identification with autistic people and other groups in general relates to more positive mental health.\textsuperscript{28} Community connectedness goes beyond identity (seeing being autistic as part of oneself and identifying with other autistic people) as ACC considers sense of belonging, social connections, and advocacy.\textsuperscript{23} These related concepts support other work showing how autistic peer-to-peer relationships can bring joy.\textsuperscript{30} More work considering connections to other communities may also be useful, as being involved in other communities likely has benefits for wellbeing.\textsuperscript{28}

We found that greater ACC correlated with more masking, and we believe this further supports our argument regarding the impact of prejudice. This finding aligns with previous work which shows that higher autistic social identity relates to more masking, and that outness and masking relates to worse mental health in the autistic community.\textsuperscript{18,48,49} Those who have stronger connections to the autistic community may be more aware of systemic barriers to inclusion and how society is not ready for unmasked autistic people.\textsuperscript{46} Alternatively, those who mask more may be more socially aware and therefore more interested in getting involved in the community. Further, those more connected might have increased awareness of masking because they move more between autistic and non-autistic spaces. In a qualitative case study about an autistic adolescent, this adolescent experienced relief upon discovering the autistic community, but then struggled with moving between a community in which he could be more himself, and one in which he could not.\textsuperscript{25} Outside the autism literature, we see this “double-bind” happening for other stigmatised communities – for example, concealing a lesbian, gay or bisexual (LGB) identity is related to poorer wellbeing, and greater outness as being LGB is also associated with poorer wellbeing.\textsuperscript{50} Increased outness may result in higher victimisation, but masking is a cognitive burden, and may increase the impact of internalised stigma on mental health. Taking ownership of a stigmatised identity within a hostile and discriminatory society likely increases minority stress.\textsuperscript{49,51}

More broadly, it is worth considering our findings in light of stereotypes and discourses around ‘autism’.\textsuperscript{44} Some of these discourses have suggested that ‘community’ is not possible for autistic people.\textsuperscript{45} Autistic people are exposed to deficit-focused rhetoric, negative biases
and regular dehumanisation.\textsuperscript{40} We found a positive relationship between autistic community connectedness and wellbeing, but we must consider how some autistic people do not want to associate themselves with the autistic community.\textsuperscript{46,47} The autistic community also has systemic issues that make it harder for multiply minoritized individuals to connect (such as racism).\textsuperscript{52} In Westernised societies, we do not foster a positive image of being autistic, and some might distance themselves from the community in response (as seen in other domains).\textsuperscript{53} More research on a lack of and/or barriers to connectedness and the potential impact of this, particularly on wellbeing, may be useful.

This study is not without limitations: most participants identified as female, although we had a reasonable number of non-binary participants compared to previous research. Autistic women may find support via the online autistic community particularly when late diagnosed.\textsuperscript{54,55} However, due to our small sample size for most genders aside from female, we were not able to investigate gender differences. In studies of self-reported masking among autistic adults, half report gender differences, and half do not.\textsuperscript{3} It is worth noting that males, non-binary and transgender participants are often underrepresented or sample sizes underpowered in masking research. We also do not know if any autistic people with intellectual disability (ID) participated. Further research examining whether masking happens for those with ID may be insightful.\textsuperscript{3} Studies with parents of children with ID indicate that ‘concealment’ can be a feature of their lives in response to ableism.\textsuperscript{56} More research considering both masking and ACC through an intersectional lens would be beneficial.

We recruited participants through online spaces (as this study took place during COVID-19), and the internet can provide a safe environment for autistic people to communicate with each other, share experiences and advocate.\textsuperscript{57,58} Autistic community connectedness may be higher in people who frequently use online spaces. It is unclear how the pandemic may have influenced responses, for example, whether autistic people feel more or less connected during this time. Additionally, our study examines the relationship between only three variables – in reality, there are undoubtedly other factors which play a role in the relationship between masking and wellbeing. Further longitudinal work would also be useful in this regard.

Finally, we used a wellbeing measure that researchers did not develop specifically for autistic people – autistic wellbeing may be different to non-autistic wellbeing, and there is a need for autistic-specific measures.\textsuperscript{59}

Conclusions

Despite these limitations, our study investigates relationships between autistic community connectedness, masking, and wellbeing, for the first time. While autistic community connectedness does relate to more positive wellbeing, it does not play a protective role against the potentially negative impacts of masking, perhaps because it cannot override the prejudice that exists towards autistic people. We call for a continued focus on the social-environmental factors that relate to masking and more research on how we can create inclusive spaces for autistic people.
Acknowledgements

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Author confirmation statement

RC and EC conceived of the study. MB provided the ACC measure. RC put the survey on Qualtrics and recruited the participants as part of their MSc Dissertation at the University of Stirling. EC analysed the data and wrote the first draft of this manuscript. MB and RC contributed to subsequent drafts. All authors approved the final version.

Conflict of interest statement

The authors have no conflicts of interest to declare.

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References


Table 1. *Demographic information including gender, employment, education, ethnicity/race and country.*

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*Two participants self-reported as Metis and Ashkenazi.*
Figure Legends

Figure 1. Interaction plot showing the relationship between masking and wellbeing, and low, medium and high autistic community connectedness (adjusted values from moderation analysis).