

Longitudinal Investigation of the Impact of Minority Stress and Autistic Community Connectedness on Mental Health in the Autistic Community

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INTRODUCTION

The minority stress model (MSM) suggests that marginalized minorities are exposed to excess stress resulting in health inequalities (Meyer, 2003).

The MSM has shown utility for understanding the high rate of mental illness in the autistic community (Botha & Frost, 2020).

Similarly intra-community connectedness can weaken the impact of perceived stigma on both depression and suicidality (Kaniuka et al, 2019).

Autistic people can experience more social rapport with other autistic people (Crompton et al., 2020)

No research has investigated the utility of the MSM for understanding mental health for autistic people over time, nor whether increased autistic community connectedness (ACC) relates to better mental health for autistic people over time.

AIMS

RQ1 Is exposure to minority stress associated with worse mental health and wellbeing over time in the autistic population?

RQ2 Is higher connectedness with the autistic community associated with better mental health over time?

METHOD

Participants and procedure:

Participants

99 Autistic participants (*Mean age = 37.2, SD = 11.5*) took part in both waves of the longitudinal study.

Procedure and measures

Participants took part in a 30-minute survey with questions measuring demographics and general life stress; minority stress (victimization, everyday discrimination, expectation of rejection, outness, concealment, and internalized stigma); autistic community connectedness; and wellbeing and psychological distress – twice, nine months apart.

ANALYSIS

Missing data was imputed using multiple imputation (18 imputations), as where there is a low degree of missing data, and regression is planned, other methods of handling missing data introduce more bias into the results (Cheema, 2014).

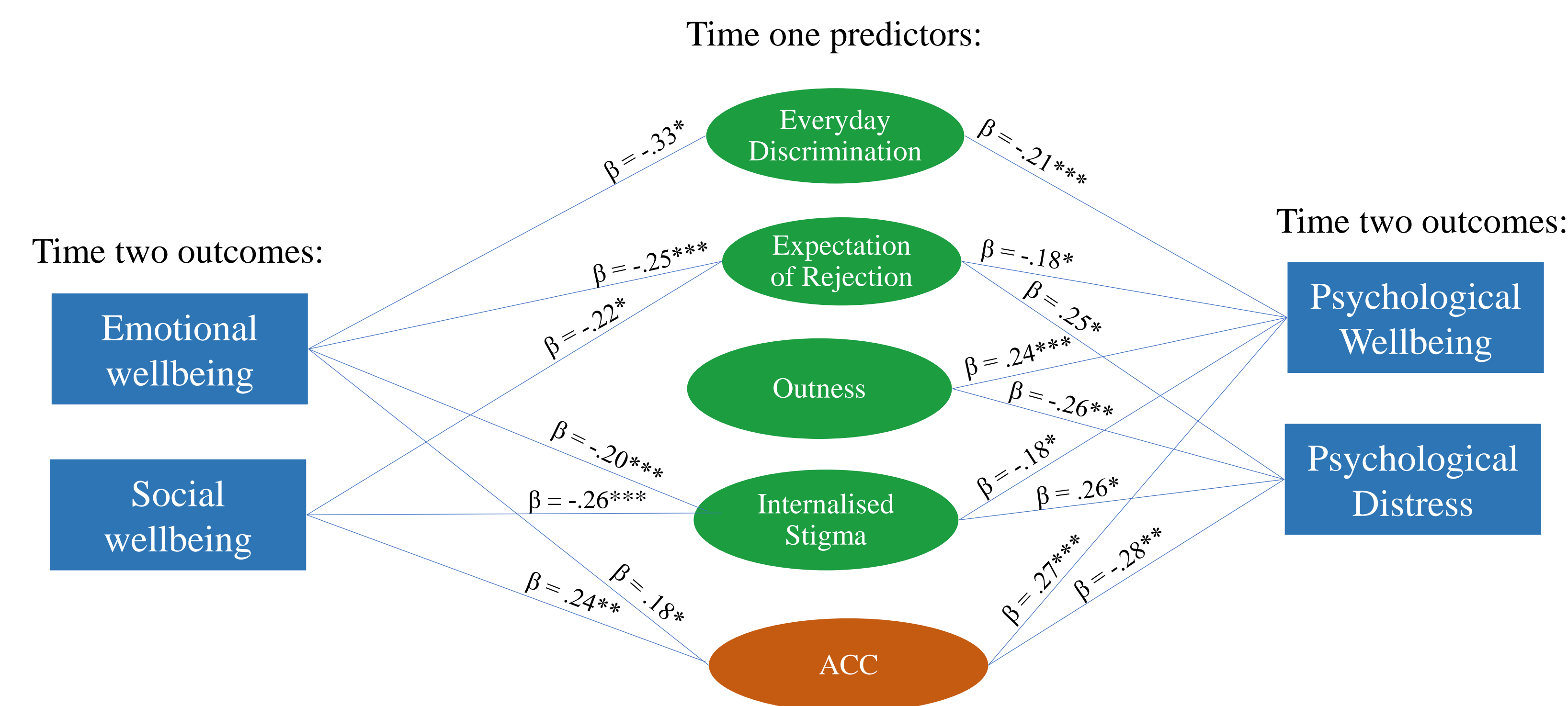
The data suffered from multi-collinearity which results in inflated prediction intervals making the model uninterpretable (Zahari et al, 2014). Ridge regression is a penalised form of linear regression which adds a penalty to the estimators – reducing their variance, the error of the prediction intervals, and making the result more likely to transfer to new samples (Helwig, 2017).

RESULTS

RQ1 Exposure to minority stress at time one was associated with significantly worse mental health and wellbeing at time two, after controlling for time one mental health score, key demographics, and general stress (figure 1.). Contrary to expectation, higher outness at time one predicted significantly better psychological wellbeing at time two.

RQ2 Higher autistic community connectedness at time one was associated with significantly higher emotional, social, and psychological wellbeing at time two, as well as significantly lower psychological distress.

Figure 1. Regression models of minority stress and ACC on mental health



Reverse causality was tested by regressing the dependent variables (mental health scores) on to the independent variables (minority stress scores) as cross-lagged panel analysis could not be done.

It was generally non-significant, except that lower social and psychological wellbeing at time one, predicted higher expectation of rejection at time two ($\beta = -.13, p = .01$; $\beta = -.18, p = .02$ respectively), while lower psychological wellbeing predicted higher internalised stigma ($\beta = -.16; p < .001$), although the relationships were smaller in this direction than the hypothesized direction.

DISCUSSION AND CONCLUSIONS

Higher exposure to minority stress was associated with significantly worse mental health and wellbeing over time.

Higher ACC was associated with better mental health and wellbeing.

While both outness and concealment (masking) are associated with lower wellbeing and higher distress in cross-sectional studies examining the MSM (Botha & Frost, 2020), outness was associated with higher wellbeing over time (may lead to support for example).

This research demonstrates the continue utility of the MSM (Meyer, 2003) and community connectedness (Frost & Meyer, 2015) for understanding wellbeing in the autistic community

LIMITATIONS & FUTURE RESEARCH

There was a high degree of drop out between the two waves of the study – this may effect the generalisability of the results. More longitudinal research with less drop-out is required.

Due to methods of data collection the sample is skewed towards autistic people who can read, use screen readers, or access the survey with some assistance. More research with autistic people with learning disabilities is required on this topic.

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REFERENCES

- 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>
- Cheema, J. R. (2014). Some General Guidelines for Choosing Missing Data Handling Methods in Educational Research. *Journal of Modern Applied Statistical Methods, 13*(2), 53–75. <https://doi.org/10.22237/jmasm/1414814520>
- Dijkstra, T. K. (2014). Ridge regression and its degrees of freedom. *Quality & Quantity, 48*(6), 3185–3193. <https://doi.org/10.1007/s1135-013-9949-7>
- Frost, Davidm., & Meyer, Ianh. (2012). Measuring Community Connectedness among Diverse Sexual Minority Populations. *Journal of Sex Research, 49*(1), 36–49. <https://doi.org/10.1080/00224499.2011.565427>
- Helwig, N. E. (2017). Adding bias to reduce variance in psychological results: A tutorial on penalized regression. *The Quantitative Methods for Psychology, 13*(1), 1–19. <https://doi.org/10.20982/qmp.13.1.p001>
- Kaniuka, A., Pugh, K. C., Jordan, M., Brooks, B., Dodd, J., Mann, A. K., Williams, S. L., & Hirsch, J. K. (2019). Stigma and suicide risk among the LGBTQ population: Are anxiety and depression to blame and can connectedness to the LGBTQ community help? *Journal of Gay & Lesbian Mental Health, 23*(2), 205–220. <https://doi.org/10.1080/19359705.2018.1560385>
- Lai, M.-C., Kasseh, 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](https://doi.org/10.1016/S2215-0366(19)30289-5)
- 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>
- Zahari, S., Mohamed Ramlil, N., & Moktar, B. (2014). Bootstrapped Parameter Estimation in Ridge Regression with Multicollinearity and Multiple Outliers (Vol. 4).

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