

The way they look at me makes me feel worse about my body. How can paranoia-like thoughts lead to a more negative body image?

Correspondence

Cite this article: Bagrowska P, Piwińska J, Gawęda Ł (2023). The way they look at me makes me feel worse about my body. How can paranoia-like thoughts lead to a more negative body image? *Psychological Medicine* 53, 5873–5875. <https://doi.org/10.1017/S0033291723000600>

Received: 15 February 2023

Revised: 17 February 2023

Accepted: 21 February 2023

First published online: 23 March 2023

Keywords:

Body image; emotion regulation; paranoia; paranoia-like thoughts; vulnerability

Author for correspondence:

Paulina Bagrowska,

E-mail: pbagrowska@psych.pan.pl

Paulina Bagrowska , Justyna Piwińska  and Łukasz Gawęda 

Experimental Psychopathology Lab, Institute of Psychology, Polish Academy of Sciences, Stefana Jaracza 1, 00-378 Warsaw, Poland

Paranoia is an unjustified fear of being observed or intentionally hurt by others (Freeman et al., 2005). Recent research has shown that negative body image may contribute to the development of paranoid thoughts (Waite et al., 2022), through its association with increased vulnerability, which is thought to be the foundation upon which paranoid thoughts are built (Freeman et al., 2005).

It has been shown (Bagrowska, Pionke-Ubych, & Gawęda, 2022) that negative emotions, low self-esteem and increased rejection sensitivity mediate the relationship between body image and paranoia-like thoughts. Moreover, it has been hypothesized that improving body image can be an important intervention target for patients experiencing persecutory delusions (Waite et al., 2022). At the same time, some work suggests that the relationship between body image and paranoia-like thoughts may be bidirectional. Very recently, paranoid thoughts have been shown to contribute to increased body dysmorphic concerns and thus a more negative body image (Toh, Phillipou, Neill, & Rossell, 2022). Another study hypothesized that the link between body image and paranoia may operate in a feedback loop (Bagrowska et al., 2022). Paranoia-like thoughts are related to negative emotions and difficulties in emotion regulation, which can contribute to lower overall self-esteem and further negatively affect body image. However, this hypothesis and the mechanisms underlying the link between paranoid thoughts and negative body image, where paranoid thoughts are a predictor, have not been studied so far.

A total of 361 people (70.4% women, 26.3% men, 3.3% other), with mean age 31.83 (s.d. = 10.25) took part in the online study, which was approved by the Ethics Committee of the Institute of Psychology of the Polish Academy of Sciences. After giving informed consent to participate, the subjects were asked to complete several questionnaires. Green Paranoid Thoughts Scale – Revised (R-GPTS) (Freeman et al., 2021) was used to measure paranoia-like thoughts ($M = 18.58$, s.d. = 16.78), Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1988) to measure negative emotions ($M = 28.66$, s.d. = 8.84), The Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004) to measure difficulties in emotion regulation ($M = 99.93$, s.d. = 27.61), Rosenberg Self-Esteem Scale (SES) (Rosenberg, 1965) to assess self-esteem ($M = 14.98$, s.d. = 6.59) and Body Esteem Scale (BES) (Franzoi & Shields, 1984) to measure body image ($M = 125.77$, s.d. = 37.26). All participants provided their weight and height (BMI: $M = 24.43$, s.d. = 5.52) and other demographic information, including a history of mental disorders.

Statistical analyses were performed in SPSS 28. Pearson's correlation analyses were performed to explore the relationships between studied variables. Serial mediation analysis carried out using model 6 in the PROCESS macro, following the bootstrapping procedure with 5000 resamples, was performed to investigate the mediating effect of negative emotions, emotion regulation and self-esteem on the relationship between paranoia-like thoughts and body image.

The correlation analysis showed significant relationships between paranoia-like thoughts and negative emotions ($r = 0.539$, $p < 0.001$), difficulties in emotion regulation ($r = 0.528$, $p < 0.001$), self-esteem ($r = -0.542$, $p < 0.001$) and body image ($r = -0.378$, $p < 0.001$), but not with BMI ($p = 0.217$).

Figure 1 presents the results of the serial mediation analysis, which aimed at investigating the role of negative emotions, emotion regulation and self-esteem in the relationship between paranoia-like thoughts and body image. The results revealed that the standardized total effect of paranoia-like thoughts on body image significantly differed from zero ($\beta = -0.323$, 95% CI -0.935 to -0.499 , $p < 0.001$). The direct effect of paranoia-like thoughts on body image was non-significant ($\beta = -0.04$, 95% CI -0.329 to 0.142 , $p = 0.436$), which means that the mediation is indirect-only. The total standardized indirect effect was significant ($\beta = -0.281$, 95% CI -0.358 to -0.206), with a significant serial mediation effect being observed from paranoia-like thoughts via negative emotions, emotion regulation and self-esteem to body image ($\beta = -0.08$, 95% CI -0.112 to -0.054). The total effect explained 19.63% of the variance in body image, and the mediated model explained 39.92% of the variance. Age, gender, BMI

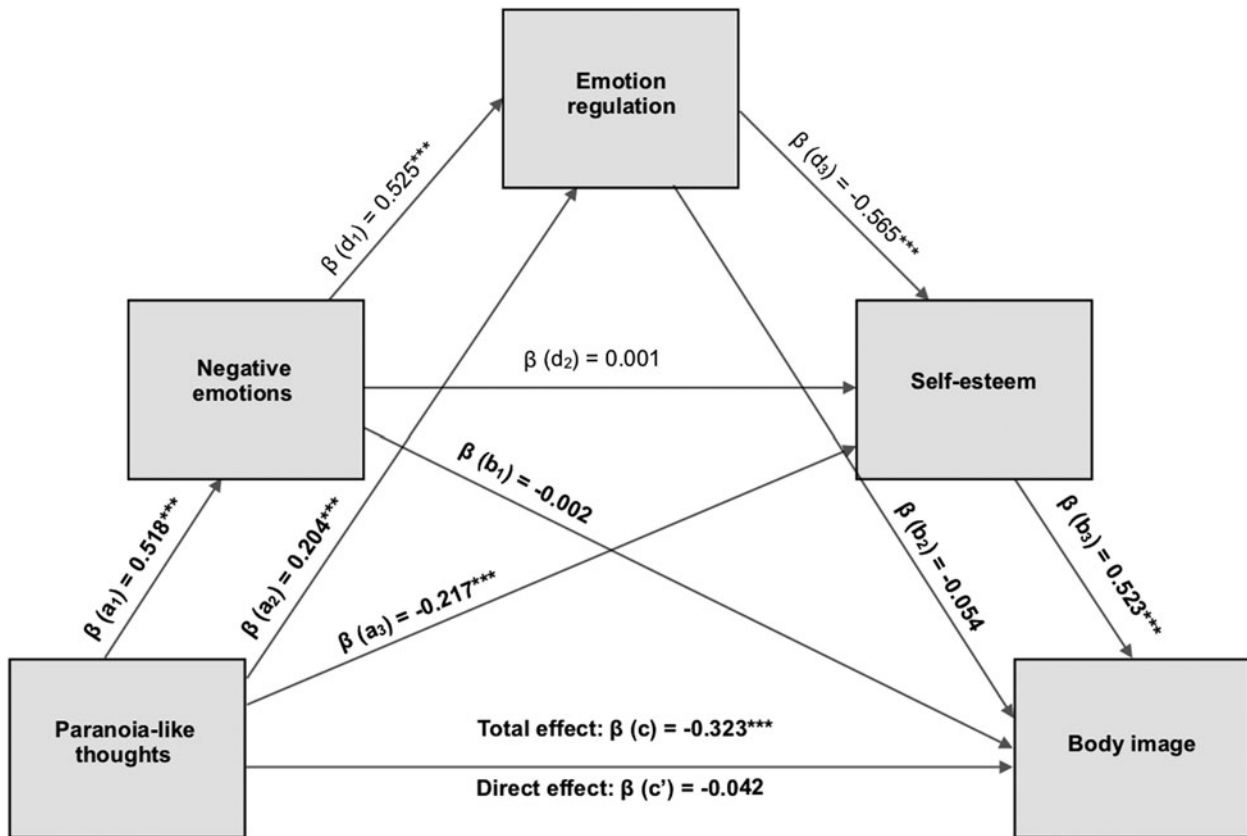


Fig. 1. Serial mediation analysis.

and diagnosis of psychiatric disorders were included as covariates in the model, but only BMI turned out to be a significant predictor ($p < 0.001$). Higher BMI was associated with a more negative body image ($r = -0.172$, $p = 0.001$).

The results support the hypothesis that paranoia-like thoughts may well be a predictor of negative body image, which, in line with previous studies (e.g. Waite et al., 2022), may suggest a bidirectional relationship between body image and paranoia-like thoughts. We showed that negative emotions, difficulties in emotion regulation and self-esteem mediate this relationship. The feeling of being constantly watched by others or being the subject of conversation and ridicule significantly affects the level of negative emotions, which, combined with difficulties in adaptive emotion regulation, may directly translate into reduced general self-esteem. This, in turn, can further worsen body image, which can be perceived as a source of gazes and laughter from others. Body appearance is subject to social evaluation, hence highly paranoid individuals who feel watched by strangers may first attribute these gazes to their own body defects (something visible at first glance), which immediately increases insecurity and negatively affects body image.

These results point to a coherent mechanism explaining how paranoia-like thoughts can influence body image. However, an important limitation of this study is its cross-sectional nature. Moreover, due to the recruitment method (advertising in social media), our sample is not representative. There was a higher percentage of women than men, and just over half of the sample (54.6%) reported being diagnosed with some mental disorder during their lifetime – mostly

depression (41.6%) and anxiety (31.9%). Nevertheless, these variables were statistically controlled.

This study shows an important role of body image in the context of paranoia-like thoughts, but this time not as a potential cause, but as an effect. Future research should focus on interventions to reduce paranoid thoughts, taking into account aspects of body image.

Financial support. This work was supported by the SONATA BIS grant from the National Science Center, Poland (LG, 2019/34/E/HS6/00279).

Conflict of interest. The authors have declared that there are no conflicts of interest in relation to the subject of this study.

Ethical standards. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

References

- Bagrowska, P., Pionke-Ubych, R., & Gawęda, Ł (2022). Bridging the gap between body image and paranoia-like thoughts. *Journal of Psychiatric Research*, 156, 660–667. doi:10.1016/j.jpsychires.2022.10.061.
- Franzoi, S. L., & Shields, S. A. (1984). The Body Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment*, 48(2), 173–178. doi:10.1207/s15327752jpa4802_12.
- Freeman, D., Garety, P. A., Bebbington, P. E., Smith, B., Rollinson, R., Fowler, D., ... Dunn, G. (2005). Psychological investigation of the structure of

- paranoia in a non-clinical population. *The British Journal of Psychiatry: the Journal of Mental Science*, 186, 427–435. doi:10.1192/bjp.186.5.427.
- Freeman, D., Loe, B., Kingdon, D., Startup, H., Molodynski, A., Rosebrock, L., ... Bird, J. (2021). The revised Green *et al.*, Paranoid Thoughts Scale (R- GPTS): Psychometric properties, severity ranges, and clinical cut-offs. *Psychological Medicine*, 51(2), 244–253. doi:10.1017/S0033291719003155.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 41–54. doi:10.1023/B:JOBA.0000007455.08539.94.
- Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.
- Toh, W. L., Phillipou, A., Neill, E., & Rossell, S. L. (2022). Intersections of paranoia and the body in the general population. *Journal of Health Psychology*. Advance online publication. doi:10.1177/13591053221133890.
- Waite, F., Diamond, R., Collett, N., Bold, E., Chadwick, E., & Freeman, D. (2022). Body image concerns in patients with persecutory delusions. *Psychological Medicine*, 1–9. Advance online publication. doi:10.1017/S0033291722000800.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. doi:10.1037//0022-3514.54.6.1063.