

Self-compassion as a mediator of the relationship between childhood sexual abuse and psychotic symptoms in clinical and non-clinical groups.

Abstract

Background: Previous research has shown a link between childhood sexual abuse (CSA) and more severe symptoms of psychosis. There is also evidence that self-compassion is a key mechanism linking adverse childhood experiences and mental health problems such as post-traumatic stress disorder and depression, but no research has examined these links in psychosis.

Methods: We analysed existing cross-sectional data, including 55 individuals with psychosis and 166 individuals from the general population. Participants completed standardised measures of CSA, self-compassion, paranoia, positive psychotic symptoms, and distress linked to psychosis.

Results: The clinical group had higher scores on CSA and all psychosis measures, but we found no differences in self-compassion between groups. Higher levels of CSA correlated with lower self-compassion and higher paranoia and positive symptoms in both groups. CSA also correlated with distress linked to psychosis in the non-clinical group. Lower self-compassion mediated the association between higher levels of CSA and more severe paranoia in both groups. In the non-clinical group, lower self-compassion also mediated the association between greater CSA and more positive psychotic symptoms and more severe distress.

Conclusions: This is the first study to show that self-compassion mediates the link between CSA and both paranoia and psychotic symptoms in adulthood. Self-compassion may therefore be an important transdiagnostic candidate target in therapy to mitigate the impact of early adversity on paranoia in both clinical and non-clinical groups. Limitations include the small clinical sample and inclusion of a cannabis-using non-clinical sample, though recent cannabis use did not impact self-compassion levels.

Keywords: Compassion, Self-Compassion, Psychosis, Paranoia, Schizophrenia, Trauma, Childhood Sexual Abuse.

Practitioner Points

- Childhood sexual abuse (CSA) is linked to more severe psychotic symptoms.
- Low self-compassion is also linked to more severe psychotic symptoms, and this appears to partially explain the relationship between CSA and more severe psychotic symptoms.
- Psychological therapies may help beneficial to reduce psychotic symptoms in those with histories of CSA.

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Introduction

The last two decades have seen a growing body of research examining the links between childhood trauma and psychosis. A meta-analysis found that people with psychosis were 2.38 times more likely to have experienced childhood sexual abuse (CSA) than controls (Varese *et al.*, 2012), and longitudinal cohort studies show that those who have experienced CSA are at greater risk of developing psychosis as adults (Bell, Foulds, Horwood, Mulder, & Boden, 2019). In their meta-analytic review, (Bailey *et al.*, 2018) showed that CSA was linked to more severe hallucinations, delusions and other positive symptoms of psychosis, though not negative symptoms. Recent research with those with psychosis has showed that self-compassion moderates cognitive fusion as a mediator between mindfulness and negative symptom severity but not total symptom severity (Böge *et al.*, 2022). CSA in psychosis is also linked to poor functioning (Aas *et al.*, 2016), depression, suicidal thoughts and anxiety (Turner *et al.*, 2020). Risk of psychosis appears to increase with more severe abuse including multiple abusers or penetrative sex (Cutajar *et al.*, 2010).

A systematic review and meta-analysis by Bloomfield *et al.* (2021) found that the relationship between developmental trauma and hallucinations was mediated by psychological variables including dissociation, emotional dysregulation and post-traumatic stress disorder (PTSD) symptoms (avoidance, numbing and hyperarousal). Negative schemata (beliefs about self and others) mediated the relationship between greater developmental trauma and more severe delusions and paranoia, and insecure attachment mediated the relationship between greater trauma and more severe paranoia (Bloomfield *et al.*, 2021). Hardy (2017) presents a model of trauma-based psychosis that integrates these mechanisms, and identifies emotion regulation, memory processes, appraisals, and ways of coping as key treatment targets.

Self-compassion is defined as the ability to relate to distressing feelings with self-kindness, common humanity, and mindful awareness (Germer & Neff, 2013). Gilbert (2020) suggests that self-compassion contributes to the activation of the “soothing system”, a neural network regulating emotions linked to threat. High self-compassion may also be viewed as a resilience factor, acting as a buffer against poor mental health (Trompetter, De Kleine, & Bohlmeijer, 2017). Low self-compassion links adverse childhood experiences with a range of later difficulties including emotional dysregulation (Vettese, Dyer, Li, & Wekerle, 2011), problematic alcohol use (Miron, Orcutt, Hannan, & Thompson, 2014), depression (Wu, Chi, Lin, & Du, 2018) and PTSD (Barlow, Turow, & Gerhart, 2017). Strikingly, the meta-analysis by Bloomfield *et al.* (2021) found no studies examining self-compassion as a potential mediator between developmental trauma and psychotic symptoms.

In psychosis, a recent meta-analysis found that self-compassion is related to positive and negative symptoms, emotional distress and cognitive disorganization (Mavituna *et al.*, 2022). People with persecutory delusions also score significantly lower on self-compassion than non-clinical controls (Collett, Pugh, Waite, & Freeman, 2016), and self-compassion predicts distress related to delusional beliefs in the non-clinical population (Scheunemann, Schlier, Ascone, & Lincoln, 2019).

Despite research showing that self-compassion mediates the association between childhood adversity and various mental health conditions, to our knowledge, no studies have examined these links in psychosis. The current study aimed to examine whether self-compassion mediates the association between CSA and paranoia, positive psychotic symptoms, and distress linked to psychotic symptoms, in both clinical and non-clinical populations.

Methods

Design

We used a cross-sectional mediation design.

Participants

We analysed secondary data from an existing study (Newman-Taylor *et al.*, 2020) which examined psychological links between cannabis use and psychotic symptoms in clinical and non-clinical groups. A total of 221 participants were recruited. The non-clinical sample was recruited through the University of Southampton research credits scheme for undergraduate psychology students as well as several open-access participant recruiting websites. The clinical sample was recruited from a community mental health team for adults in the south of England, participants were identified and invited to take part in the study by their mental health practitioner.

The clinical group ($n=55$) comprised individuals with a diagnosis of a psychotic illness under a UK National Health Service (NHS) Early Intervention in Psychosis service; 36.3% ($n=38$) had used cannabis at some point in their lives and 6.7% ($n=4$) had used cannabis in the past 3 months. The non-clinical group ($n=166$) was general population sample recruited online, all of whom had used cannabis in the past 12 months, and 78.5% ($n=135$) in the past 3 months. This was due to this data being part of a study on psychological mechanisms linking cannabis use and psychosis. The self-compassion measure was only used for a sub-sample of non-clinical group who had used cannabis in the past 12 months (Newman-Taylor *et al.*, 2020). Table 1 displays the demographic variables of both samples.

*** *Insert Table 1 here* ***

Ethics

University ethics approval was obtained for the original research secondary analysis. NHS approval was also obtained for collection of clinical data.

Measures

Childhood Sexual Trauma Questionnaire (J. Houston, Murphy, Shevlin, & Adamson, 2011): A 3-item measure of history of childhood sexual abuse via questions such as: “*Before the age of 16, did anyone touch you, or get you to touch them, in a sexual way without your consent?*” Higher scores represent more severe experiences of childhood sexual abuse (0-3). Chronbach’s alpha was .64 in the non-clinical sample and .83 in the clinical sample. This is just below acceptable for the non-clinical group, however a low alpha can result from a small number of items (Tavakol & Dennick, 2011), and the inter-item mean correlation for this group was .24 which is acceptable (Clark & Watson, 2016).

Brief Self-Compassion Scale (Raes, Pommier, Neff, & Van Gucht, 2011): A 12-item measure of self-compassion with questions such as “*I’m disapproving and judgmental about my own flaws and inadequacies*”. Higher scores represent higher levels of self-compassion. Cronbach’s alpha was .83 in the non-clinical sample and .86 in the clinical sample.

Prodromal Questionnaire-Brief version (Loewy, Pearson, Vinogradov, Bearden, & Cannon, 2011): A 21-item measure of psychotic symptoms such as “*Do you sometimes get strange feelings on or just beneath your skin, like bugs crawling?*” We used two subscales – total positive symptoms ($\alpha=.80$ non-clinical, $\alpha=.79$ clinical) and distress ($\alpha=.81$ non-clinical, $\alpha=.85$ clinical).

Paranoia Scale (Fenigstein & Venable, 1992): A 20-item measure of paranoid thinking patterns such as “*I have often felt that strangers were looking at me critically*” ($\alpha=.92$ non-clinical, $\alpha=.77$ clinical).

Data

For both the clinical and non-clinical groups, kurtosis and skewness were in the normal range (-2 to +2) for all measures, suggesting normal distribution.

We used Pearson's one-tailed correlations to examine relationships between measures, and a MANOVA to compare differences on these measures between clinical and non-clinical groups. Given differences in cannabis use between groups (6.7% used in past 3 months in clinical group, 78.5% in non-clinical group), and this being measured categorically, we ran an independent samples *t*-tests to determine if cannabis use was linked to self-compassion. Mediation was conducted using PROCESS (v.4.0) for SPSS (Hayes, 2018) with 5000 bootstrap samples and a 95% CI; when this CI does not straddle zero, mediation is inferred. Kline (2015) estimates that 10-20 participants per parameter are required for path models, so $n=55$ for the clinical group was sufficient to test simple mediation with three paths.

Results

Participant characteristics

The age range for the clinical group was 17-47 years ($M=40.2$) and 18-47 years ($M=21.0$) for the non-clinical group. Most participants identified as White (87.3%, $n=48$ clinical group; 79.5%, $n=132$ non-clinical group).

Between-Group Differences

We used a MANOVA to compare clinical and non-clinical groups on all measures. Compared to the non-clinical group, total scores were higher for the clinical group for CSA ($F=4.47$, $p<.05$), positive symptoms ($F=54.3$, $p<.001$), distress ($F=66.82$, $p<.001$) and paranoia ($F=60.05$, $p<.001$). There was no between-group difference in self-compassion ($F=0.58$, $p<.05$).

In both groups combined, self-compassion did not differ between those who had used cannabis in the past 3 months and those who had not ($t=-1.76$, $df=219$, $p>.05$, two-tailed).

Correlations

Table 1 presents Pearson's one-tailed correlations between variables. Greater CSA was positively associated with lower self-compassion, higher paranoia, and more positive symptoms. Greater CSA was positively associated with distress in the non-clinical group (though not in the clinical group).

*** *Insert table 1 here* ***

Mediations

In both groups, we found indirect effects of greater CSA on more severe paranoia via lower self-compassion (non-clinical: $ab=1.06$, $SE=.43$, 95% CI=[0.26, 1.96]; clinical: $ab=2.06$, $SE=1.32$, 95% CI=[0.01, 5.13]).

In the non-clinical group, we found an indirect effect of greater CSA on more severe positive symptoms via lower self-compassion ($ab=0.22$, $SE=0.11$, 95% CI=[0.04, 0.45]). While this indirect effect was not found in the clinical group ($ab=0.48$, $SE=0.35$, 95% CI=[-0.01, 1.32]), lower levels of self-compassion did predict more positive symptoms ($b=-0.24$, $p=.006$).

In the non-clinical group, there was also an indirect effect of greater CSA on more severe distress via lower self-compassion ($ab=0.86$, $SE=0.40$, 95% CI=[0.18, 1.75]). In the clinical group, lower self-compassion did not mediate a link between greater CSA and more severe distress ($ab=0.00$, $SE=0.00$, 95% CI=[-0.00, 0.10]).

Discussion

We sought to examine whether self-compassion mediates the association between CSA and symptoms of psychosis in a clinical and non-clinical sample. In both groups, greater CSA was linked to more severe paranoia and positive psychosis symptoms. The correlation with distress was only significant in the non-clinical group, though as effect sizes were similar for the two groups, this non-significant result may be due to the smaller sample size of the clinical group. We found higher rates of CSA and more severe psychotic symptoms (on all measures) in the clinical group, in line with meta-analyses showing that people with psychosis are at greater risk of CSA with a likely dose-response effect (Varese *et al.*, 2012), though noting that another, which focused on schizophrenia specifically, found no differences in prevalence of CSA (Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013).

Lower-self compassion was linked to more severe paranoia, positive symptoms of psychosis, and distress linked to psychotic symptoms in both groups. This aligns with previous research showing that self-compassion is associated with positive and negative symptoms of psychosis (Collett *et al.*, 2016; Mavituna *et al.*, 2022; Scheunemann *et al.*, 2019). However, self-compassion did not differ between clinical and non-clinical groups, which is at odds with Collett *et al.* (2016) who found lower levels of self-compassion in people with persecutory delusions compared to a healthy control group which was matched by age and gender. It may also be the non-matched demographic groups in our sample and different inclusion criteria (broadly psychosis rather than persecutory delusions specifically) may explain the differences with the Collett *et al.* (2016) paper.

In both groups, lower self-compassion mediated the link between more severe CSA and more severe paranoia. The mediating role of self-compassion in the links between CSA and both more severe positive symptoms and distress was only significant for the non-clinical group. Again, this may be due to our small clinical sample.

Previous research has shown that self-compassion mediates the association between adverse childhood experiences and mental health problems including PTSD (Barlow *et al.*, 2017) and depression (Wu *et al.*, 2018). To our knowledge, this is the first study to demonstrate the mediating role of self-compassion in the relationship between CSA and psychotic experiences, and evidences this across the clinical-non-clinical spectrum. This also extends the literature on psychological mechanisms linking childhood trauma and psychotic symptoms (Bloomfield *et al.*, 2021).

The study is limited by a small clinical sample, the difference between groups in cannabis use and demographics, and cross-sectional design. Due to the recruitment methods the opt-in rate of participants is not known. However, analyses were conducted separately for each group, so the differences do not impact the results, and recent cannabis use did not affect self-compassion levels. Regarding the non-clinical sample, who had all used cannabis in the past year, it is of note that CSA is a risk factor for cannabis use (Hayatbakhsh, Najman, Bor, O'Callaghan, & Williams, 2009), so the prevalence of CSA in our sample might be higher than in the general population. It is also important to note that both CSA and cannabis are risk factors for psychosis (Harley *et al.*, 2010; J. Houston *et al.*, 2011; J. E. Houston, Murphy, Adamson, Stringer, & Shevlin, 2008; Sidel *et al.*, 2018). Replication with a larger clinical sample and non-cannabis using control group is needed. Experimental studies are required to examine causality, and longitudinal research would determine if CSA impacts changes in psychosis symptomatology via self-compassion over time.

The current study suggests that targeting self-compassion (Gilbert, 2010) might mitigate the impact of CSA on paranoia, positive psychotic symptoms and distress, both for people with a psychosis diagnosis and non-clinical groups. A recent systematic review highlighted the evidence for compassion-focused therapy in a range of clinical populations including people with psychosis and PTSD, with small to large effect sizes for increasing self-

compassion (Millard, Wan, Smith, & Wittkowski, 2023). Interventions targeting self-compassion in the context of CSA (McLean, Steindl, & Bambling, 2018) may be particularly beneficial to people with clinical levels of paranoia with sexual abuse histories.

References

- Aas, M., Andreassen, O. A., Aminoff, S. R., Færden, A., Romm, K. L., Nesvåg, R., Berg, A. O., Simonsen, C., Agartz, I., & Melle, I. (2016). A history of childhood trauma is associated with slower improvement rates: findings from a one-year follow-up study of patients with a first-episode psychosis. BMC psychiatry, *16*, 1-8.
- Bailey, T., Alvarez-Jimenez, M., Garcia-Sanchez, A. M., Hulbert, C., Barlow, E., & Bendall, S. (2018). Childhood trauma is associated with severity of hallucinations and delusions in psychotic disorders: a systematic review and meta-analysis. Schizophrenia bulletin, *44*, 1111-1122.
- Barlow, M. R., Turow, R. E. G., & Gerhart, J. (2017). Trauma appraisals, emotion regulation difficulties, and self-compassion predict posttraumatic stress symptoms following childhood abuse. Child abuse & neglect, *65*, 37-47.
- Bell, C. J., Foulds, J. A., Horwood, L. J., Mulder, R. T., & Boden, J. M. (2019). Childhood abuse and psychotic experiences in adulthood: findings from a 35-year longitudinal study. The British Journal of Psychiatry, *214*, 153-158.
- Bloomfield, M. A., Chang, T., Woodl, M. J., Lyons, L. M., Cheng, Z., Bauer-Staeb, C., Hobbs, C., Bracke, S., Kennerley, H., & Isham, L. (2021). Psychological processes mediating the association between developmental trauma and specific psychotic symptoms in adults: A systematic review and meta-analysis. World Psychiatry, *20*, 107-123.
- Böge, K., Pollex, F., Bergmann, N., Hahne, I., Zierhut, M. M., Mavituna, S., Thomas, N., & Hahn, E. (2022). Mindfulness, cognitive fusion, and self-compassion in patients with schizophrenia spectrum disorders—A cross-sectional study. Frontiers in Psychiatry, *13*.
- Clark, L. A., & Watson, D. (2016). Constructing validity: Basic issues in objective scale development.
- Collett, N., Pugh, K., Waite, F., & Freeman, D. (2016). Negative cognitions about the self in patients with persecutory delusions: An empirical study of self-compassion, self-stigma, schematic beliefs, self-esteem, fear of madness, and suicidal ideation. Psychiatry research, *239*, 79-84.
- Cutajar, M. C., Mullen, P. E., Ogloff, J. R., Thomas, S. D., Wells, D. L., & Spataro, J. (2010). Schizophrenia and other psychotic disorders in a cohort of sexually abused children. Archives of general psychiatry, *67*, 1114-1119.
- Fenigstein, A., & Vanable, P. A. (1992). Paranoia and self-consciousness. Journal of personality and social psychology, *62*, 129.
- Germer, C. K., & Neff, K. D. (2013). Self-compassion in clinical practice. Journal of clinical psychology, *69*, 856-867.
- Gilbert, P. (2010). Compassion focused therapy: Distinctive features: Routledge.
- Gilbert, P. (2020). Compassion: From its evolution to a psychotherapy. Frontiers in Psychology, *3123*.
- Hardy, A. (2017). Pathways from trauma to psychotic experiences: a theoretically informed model of posttraumatic stress in psychosis. Frontiers in psychology, *8*, 697.
- Harley, M., Kelleher, I., Clarke, M., Lynch, F., Arseneault, L., Connor, D., Fitzpatrick, C., & Cannon, M. (2010). Cannabis use and childhood trauma interact additively to increase the risk of psychotic symptoms in adolescence. Psychological medicine, *40*, 1627-1634.
- Hayatbakhsh, M. R., Najman, J. M., Bor, W., O'Callaghan, M. J., & Williams, G. M. (2009). Multiple risk factor model predicting cannabis use and use disorders: a longitudinal study. The American journal of drug and alcohol abuse, *35*, 399-407.
- Houston, J., Murphy, J., Shevlin, M., & Adamson, G. (2011). Cannabis use and psychosis: re-visiting the role of childhood trauma. Psychological Medicine, *41*, 2339-2348.
- Houston, J. E., Murphy, J., Adamson, G., Stringer, M., & Shevlin, M. (2008). Childhood sexual abuse, early cannabis use, and psychosis: testing an interaction model based on the National Comorbidity Survey. Schizophrenia bulletin, *34*, 580-585.

Kline, R. B. (2015). Principles and practice of structural equation modeling: Guilford publications.

Loewy, R. L., Pearson, R., Vinogradov, S., Bearden, C. E., & Cannon, T. D. (2011). Psychosis risk screening with the Prodromal Questionnaire—brief version (PQ-B). Schizophrenia research, *129*, 42-46.

Matheson, S., Shepherd, A. M., Pinchbeck, R., Laurens, K., & Carr, V. J. (2013). Childhood adversity in schizophrenia: a systematic meta-analysis. Psychological medicine, *43*, 225-238.

Mavituna, S., Hahn, E., Hahne, I., Bergmann, N., Pijnenborg, M., Ta, T. M. T., Tafelski, L., & Böge, K. (2022). Compassion-based approaches: a systematic review of their effectiveness and acceptability in schizophrenia spectrum disorders. Current Psychology, 1-15.

McLean, L., Steindl, S. R., & Bambling, M. (2018). Compassion-focused therapy as an intervention for adult survivors of sexual abuse. Journal of child sexual abuse, *27*, 161-175.

Millard, L., Wan, M. W., Smith, D., & Wittkowski, A. (2023). The effectiveness of compassion focused therapy with clinical populations: A systematic review and meta-analysis. Journal of Affective Disorders.

Miron, L. R., Orcutt, H. K., Hannan, S. M., & Thompson, K. L. (2014). Childhood abuse and problematic alcohol use in college females: The role of self-compassion. Self and Identity, *13*, 364-379.

Newman-Taylor, K., Richardson, T., Sood, M., Sopp, M., Perry, E., & Bolderston, H. (2020). Cognitive mechanisms in cannabis-related paranoia; Initial testing and model proposal. Psychosis, *12*, 314-327.

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self-compassion scale. Clinical psychology & psychotherapy, *18*, 250-255.

Scheunemann, J., Schlier, B., Ascone, L., & Lincoln, T. M. (2019). The link between self-compassion and psychotic-like experiences: A matter of distress? Psychology and Psychotherapy: Theory, Research and Practice, *92*, 523-538.

Sideli, L., Fisher, H. L., Murray, R. M., Sallis, H., Russo, M., Stilo, S. A., Paparelli, A., Wiffen, B. D., O'Connor, J. A., & Pintore, S. (2018). Interaction between cannabis consumption and childhood abuse in psychotic disorders: preliminary findings on the role of different patterns of cannabis use. Early intervention in Psychiatry, *12*, 135-142.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. International journal of medical education, *2*, 53.

Trompetter, H. R., De Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. Cognitive therapy and research, *41*, 459-468.

Turner, S., Harvey, C., Hayes, L., Castle, D., Galletly, C., Sweeney, S., Shah, S., Keogh, L., & Spittal, M. (2020). Childhood adversity and clinical and psychosocial outcomes in psychosis. Epidemiology and psychiatric sciences, *29*.

Varese, F., Smeets, F., Drukker, M., Lieveise, R., Lataster, T., Viechtbauer, W., Read, J., Van Os, J., & Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective-and cross-sectional cohort studies. Schizophrenia bulletin, *38*, 661-671.

Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. International Journal of Mental Health and Addiction, *9*, 480-491.

Wu, Q., Chi, P., Lin, X., & Du, H. (2018). Child maltreatment and adult depressive symptoms: Roles of self-compassion and gratitude. Child Abuse & Neglect, *80*, 62-69.

Table 1

Demographic characteristics of the clinical and non-clinical sample

Demographic Variable	Clinical group	Non-Clinical group
Age	17-69, $M=40.22$, $SD=13.06$	18-47, $M=21.0$, $SD=4.79$
Nationality	100% ($n=55$) British residents (nationality unknown)	66.3% ($n=110$) British 21.7% ($n=36$) USA 6.6% ($n=11$) European countries 5.4% ($n=9$) outside Europe
Gender	63.3% ($n=38$) male 36.7% ($n=22$) female	27.1% ($n=45$) male 72.3% ($n=120$) female 0.6% ($n=1$) non-binary
Ethnicity	87.3% ($n=48$) White 5.5% ($n=3$) Black or Black British 1.8% ($n=1$) Asian or Asian British 3.6% ($n=2$) mixed ethnicity 1.8% ($n=1$) other ethnic groups	79.5% ($n=132$) white 2.4% ($n=4$) Black or Black British 7.2% ($n=12$) Asian or Asian British 6.6% ($n=11$) mixed ethnicity 4.2% ($n=7$) other ethnic groups

Table 2: Correlations

	Childhood Sexual Abuse	Self- compassion	PQB positive symptoms	PQB distress
Childhood Sexual Abuse	-			
Clinical group (n=55)				
Self-compassion	-.23*	-		
PQB positive symptoms	.30*	-.41***	-	
PQB distress				
	.19	-.38**	.83***	-
Paranoia Scale	.30*	-.48***	.67***	.67***
Non-Clinical group (n=166)				
Self-compassion	-.21**	-		
PQB positive symptoms	.21**	-.28***	-	
PQB distress	.24**	-.33***	.92***	-
Paranoia Scale	.29***	-.40***	.56***	.54***

*= $p < .05$

**= $p < .01$

***= $p < .001$