

A Framework of Belief in Paranormal Experiences and its Relation to Positive/Negative Schizotypy

Alejandro Parra



Abstract

Background: Paranormal experiences that fit into a prior framework of belief are seen as more pleasant, while individuals without such a framework find them intrusive and disturbing.

Methods: Undergraduate students (no paranormal experiences group, $N= 1574$) and people who attended workshops on paranormal/spiritual topics (paranormal experiences group, $N= 416$) completed two questionnaires, the OLIFE which assesses schizotypy in four dimensions and the Paranormal Experiences Questionnaire which collects information on spontaneous paranormal experiences.

Objectives: To test people who have more experiences and paranormal beliefs are able to cope with potentially distressing effects of such experiences.

Results: Members of the paranormal experiences group were less cognitively disorganised and tended to have more unusual paranormal experiences. Individuals with more paranormal beliefs/experiences may indeed be able to cope better with the potentially distressing effects of such experiences.

Discussion: Individuals with more unusual experiences may be able to 'buffer' their potentially distressing effects through the existence or construction of a framework in which to place them; for the no paranormal experiences group (individuals without a belief framework), positive schizotypy might, in fact, be adaptive, as highly magical thinking provides a better chance of creating an effective and imaginative framework to account for the odd experiences.

Keywords: Belief framework; Paranormal beliefs/experiences; Schizotypy; Magical thinking; Distressing effect.

In recent years, it has examined the relationship between schizotypal personality traits and paranormal beliefs. Windholz and

Diamant (1) found that believers in the paranormal scored significantly higher on the schizophrenia subscale of the Inventory

Minnesota Multiphasic Personality (2) compared with a group of non-believers in the paranormal. Thalbourne (7) found that college students who believed and claimed to have had experiences with the paranormal tended to score higher on the Magical Ideation Scale (3) and Perceptual Aberration Scale (3). Wolfradt et al. (4) concluded that the perceptual aspects of schizotypy and magical thinking are indicators of processes that are associated with vulnerability to psychosis.

Negative schizotypy, identified as a separate factor of schizotypy, and usually evaluated in terms of physical anhedonia and / or social, can be an indicator of risk of mental disturbance, for example, Mason, Claridge and Williams (5) found in based on a sample of creative artists and poets, the anhedonia negatively correlated with creativity. The authors argue that anhedonia is what differentiates the positive schizotypy creative people of clinical individuals. People with "high positive and low negative" (and therefore, in healthy condition) can channel their creativity via schizotypal tendencies, scores while individuals with scores "high negative and low positive" (and therefore dysfunctional) succumb to the desorganizational effects of positive schizotypy and generate disorders.

There seems to be largely anecdotal evidence of a link between paranormal belief and psychosis proneness. Based on the criteria of Claridge (8) according to which magical thinking is a symptom of schizotypy, the latter was operationalized as

magical thinking or ideation." Chapman, Chapman and Raulin (3) built the Magical Ideation Scale, for which there is also a relationship with the propensity to psychosis, like schizophrenia. Both define magical thinking as "belief" and poses experiences as an invalid causation" (p. 215). Moreira-Almeida and Menezes (9) reviewed the concept of "spiritual and religious issues" and the relationship between religion, spirituality and psychosis based on the DSM-IV, concluding that although they may seem to psychotic episodes, are actually manifestations not pathological spiritual and religious experiences. Both authors raise a number of criteria that could be used for differential diagnosis between healthy spiritual experiences and mental disorders of religious content. The importance of this issue and the lack of quality research point to the need for further research (see 6). Indeed, certain spiritual experiences can often be confused with psychotic and dissociative symptoms. There are nine identified by consensus among researchers that could indicate a proper distinction between spiritual experiences and psychotic and dissociative disorders criteria, such as lack of psychological distress, lack of social and occupational impairment, short experience, critical attitude (doubt the reality of the experience), support for cultural or religious group, absence of co-morbidities, control over the experience, personal growth over time, and an attitude to help others (10; 11).

There was a trend for people to have experienced negative schizotypy lower

scores than those who had no experience, and a higher level of perceptual-cognitive in those who did not experience schizotypy. This does not necessarily have psychopathological consequences for the individual, people have paranormal experiences may simply be more sensitive to anomalous perceptual experiences have. Parra and Espinosa Paul (12) found greater cognitive-perceptual schizotypy in individuals who claim to be able to see the "aura" or energy field surrounding a person compared to those without this experience. Possibly, these people have a much more intense imaginative life. Parra and Espinosa (12) also found greater cognitive-perceptual schizotypy and proneness to hallucination people that read have extrasensory experiences. These findings suggest that there are other underlying dissociative processes, such as absorption and fantasy proneness, which are associated with such experiences.

Importantly, paranormal experiences and beliefs are different concepts, but both elements sometimes overlap on the scales (13). Paranormal experiences may have an adaptive function, and even also "protective". Gómez Montanelli and Parra (14) suggested that paranormal beliefs represent a cognitive defense against uncertainty, while others are related to psychopathology, especially schizotypy. Parra and Espinoza (12) also found a significant difference in positive symptoms of schizotypy in the group of spiritual students and non-spiritual" ($p = 0.02$) but not significant for negative symptoms. It was also noted that all paranormal

experiences correlated significantly with the positive symptoms of schizotypy. Although phenomena such as telepathy and see the aura was not associated with negative symptoms of schizotypy, however, a significant correlation between the out of body experience, the feeling of presence, and the experience of seeing apparitions with negative symptoms was found, but substantially less than the positive symptoms.

This paper tests the hypothesis that people who have more experiences and paranormal beliefs are able to cope with potentially distressing effects of such experiences. Specifically, (1) that the paranormal group will score higher on Unusual experiences, Cognitive disorganization, Introverted anhedonia, Impulsive Nonconformity, the total score of the sub-factors of schizotypy and positive schizotypy, negative schizotypy compared to no paranormal group, (2) the index of the paranormal group correlated positively with unusual experiences and subfactor scores positive/negative schizotypy, and (3) that the score of non-paranormal experiences paranormal group (students) correlated positively with subfactors Unusual experiences, Cognitive disorganization, Introverted anhedonia, Impulsive nonconformity, the total score of the sub-factors of schizotypy and positive schizotypy, negative schizotypy.

METHOD

Participants

Paranormal group: The sample consisted of 416 participants, 309 (74%) females and 107 (26%) males, who were all well-educated and believed in psi. Their ages ranged from 17 to 83 ($M = 44.29$; $SD = 13.64$). Participants were recruited through media announcements in newspapers and an e-mail list at the Institute of Paranormal Psychology. An announcement placed on a web page (www.alipsi.com.ar) provided a brief explanation of the test procedure and encouraged people to schedule an interview with the authors in order to obtain more information. The participants met during two-hour workshops, free of charge, organized at the Institute of Paranormal Psychology (IPP) in Buenos Aires, Argentina. Participants completed both questionnaires in a counterbalanced way. Participants were recruited through advertisements in media and email list. An advertisement was also placed on a web page (www.alipsi.com.ar). The announcement contains a brief explanation of the procedure and encouraged participants to arrange an interview with us for more information.

Non-paranormal group: From a total of 1850 undergraduate students recruited from the psychology department, I received 1574 usable questionnaires (85%). The participants were adults, most of them students at the South Campus at the Universidad Abierta Interamericana in the Buenos Aires area. Since I was interested in obtaining as many reports as possible, I included 5 non-students, who were referred to me by the participants. In all cases these individu-

als were family members or friends of the students who referred them. Participation was voluntary, and the participants received no pay. The students who returned the questionnaires included 909 (57%) females and 665 (43%) males, ranging in age from 15 to 83 ($Mean = 33.84$; $SD = 12.84$).

Procedure

The set of scales was presented in a single envelope. Each person, after receiving vague information about the aims of the study, was invited to complete the scales anonymously. The students who requested questionnaires were given a cover letter and copies of both instruments at the same time. The returned questionnaires, which were stored unexamined throughout the recruitment and collection periods, were given the pseudo-title *Questionnaire of Psychological Experiences, Forms A and B*, in a counterbalanced order to encourage unbiased responses.

An appropriate informed consent was obtained, using language presumed to be understandable by the participants. The content of the informed consent implied that the person (1) had the capacity to consent, (2) had been informed of all significant information concerning the procedure, and (3) had freely and without undue influence expressed consent. In addition, participants received information that the consent had been appropriately documented.

Design and Materials

RESULTS

Table 1: FREQUENCY AND PERCENTAGE OF PARANORMAL EXPERIENCES

<i>Paranormal Experiences Questionnaire</i>	<i>Paranormal</i>	<i>Non-paranormal</i>
	<i>Group</i> (N= 416)	<i>group</i> (N= 1574)
1. ESP Dreams	331 (79.6%)	628 (39.9%)
2. Telepathy	285 (68.5%)	608 (38.6%)
3. Aura	191 (45.9%)	236 (15.0%)
4. Out-of-body experiences	127 (30.5%)	288 (18.3%)
5. Sense of Presence	240 (57.7%)	623 (39.6%)
6. Mediumship/Possession	211 (50.7%)	172 (10.9%)
7. Spontaneous PK	256 (61.5%)	273 (17.3%)
8. Healing Experience	333 (80.0%)	322 (20.5%)
9. Mystical Experience	223 (53.6%)	226 (14.3%)
10. Apparitional Experiences	147 (35.3%)	186 (11.8%)

Table 2: COMPARISON OF O-LIFE SCORES AND INDEX OF PARANORMAL GROUP WITH NON-PARANORMAL GROUP

<i>O-LIFE</i>	<i>Group (a)</i>		<i>z</i>
	<i>Mean (SD)</i>	<i>Mean (SD)</i>	
1. <i>Unusual Experiences (UE)</i>	.73 (1.12)	.34 (.24)	14.40***
2. <i>Cognitive Disorganisation (CD)</i>	.78 (1.28)	.42 (.23)	5.90***
3. <i>Introvertive Anhedonia (IA)</i>	.87 (.92)	.34 (.23)	18.56***
4. <i>Impulsive Nonconformity (INC)</i>	.46 (.55)	.29 (.20)	5.53***
<i>Positive schizotypy (UE + CD)</i>	1.51 (2.33)	.76 (.40)	11.54***
<i>Negative schizotypy (IA + INC)</i>	1.34 (1.41)	.63 (.37)	15.04***
<i>O-LIFE (Total)</i>	2.87 (3.64)	1.39 (.63)	14.23***

(a) Since the data were not normally distributed, the *U* de

Mann-Whitney test was used to test the hypotheses (all *p*

value one-tailed). Spearman's Rho correlation * $p < .01$; **

$p < .005$; $p^{***} < .001$

(b) *Paranormal* N= 416 and *Non-paranormal* N= 1574.

Table 3: CORRELATIONS BETWEEN SCHIZOTYPY SCORES AND INDEX OF EXPERIENCES ^(a)

	<u>Unusual</u>	<u>Cognitive</u>	<u>Introvertive</u>	<u>Impulsive</u>	<u>Total</u>	<u>Positive</u>	<u>Negative</u>
	<u>Experiences</u>	<u>Disorganisation</u>	<u>Anhedonia</u>	<u>Nonconformity</u>	<u>O-LIFE</u>	<u>schizotypy</u>	<u>schizotypy</u>
Index							
(Paranormal	.104*	-.132*	.058	.027	.028	.036	.016
group) ^(b)							
Index (Non-							
paranormal	.281**	.048*	.056	-.131**	.111**	.189**	-.018
group) ^(b)							

(a) Spearman's Rho * p = .01; ** p = .005; *** <.001

(b) 1= No experiences to 10 = All experiences.

Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE) (13): This instrument is a validated 150-item questionnaire assessing schizotypy in terms of four dimensions. Positive schizotypy is assessed by Unusual Experiences and Cognitive Disorganisation. Negative schizotypy is assessed by Introvertive Anhedonia and Impulsive Nonconformity. Phenomenologically related to the positive symptoms of psychosis, it measures a trait often termed "positive schizotypy". Norms for the questionnaire are reported by Mason et al. (13) and Mason, Claridge, and Williams (5). Psychometric evaluation of the O-LIFE has shown good test-retest reliability (coefficient alpha =.80), as well as acceptable internal consistency (coefficient alpha >.77). The Cronbach alpha measure of internal consistency was.91 in the Argentine O-LIFE.

Unusual Perceptual Experiences Questionnaire (CEPI) (15). It is a questionnaire of 14

items that includes subjective unusual perceptual experiences, such as precognitive dreams, telepathy, see aura, out of body experiences, sense of presence, mediumship, possession, healing experience (as a healer), déjà vu, mystical experiences, appearances (seeing ghosts), among others, is answered as "never", "rarely" or "multiple times." The internal reliability of CEPI is good with a Cronbach's alpha of .88, the test-retest reliability was determined in 66 participants who completed the CEPI at a second time, after 6 months, and found acceptable to all measurements when testing with Pearson correlations (.92) and demonstrates that this inner reliability remained stable with time. A construct validity was also assessed by correlating the total score with the subscales of CEPI Anomalous Experiences Inventory (AEI) (21). The total score of CEPI shows significant positive correlations with the subscales of Unusual Experi-

ences AEI producing a good convergent validity.

Analysis

Data were loaded and processed using *SPSS 20*. Was carried out an assessment of the normality of the sample. From the values obtained (Shapiro-Wilks statistic), an asymmetric distribution of the scores of both instruments was assumed. Therefore, non-parametric statistics are used. To compare the two samples | Animal | Mann-Whitney was used, and to correlate Spearman Rho was used. Hypothesis 1 was that the paranormal group would score higher on Unusual Experiences, Cognitive Disorganisation, Introvertive Anhedonia, and Impulsive Nonconformity, as well as receive a higher O-LIFE total score and positive/negative schizotypy scores than the nonparanormal. This hypothesis was supported: the mean for experients was significantly higher than that for nonexperients (Mean $z = 13.28$, $p < .001$, one-tailed) (see Table 2).

Hypothesis 2 was that the paranormal group would score higher on Index (psi count experiences) scores than the non-paranormal. This hypothesis was also supported: the mean (6.36) for experients was significantly higher than that for nonexperients (3.00) ($p < .001$, one-tailed) (see Table 2).

Hypothesis 3 was that the Index in the Paranormal group would correlate positively on Unusual Experiences and positive/negative schizotypy scores, which was sup-

ported only for Unusual Experiences ($r_s = .104$). In an inverse direction, the Index correlated negatively on Cognitive Disorganisation ($r_s = -.132$) (see Table 3).

Hypothesis 4 was that the Index in the non-paranormal group of students would correlate positively in Unusual Experiences, Cognitive Disorganisation, Introvertive Anhedonia, Impulsive Nonconformity, O-LIFE total score, and positive/negative schizotypy scores, which was supported only for Unusual Experiences ($r_s = .281$), Cognitive Disorganisation ($r_s = .048$), Introvertive Anhedonia ($r_s = .056$), Total O-LIFE ($r_s = .111$), and Positive schizotypy ($r_s = .189$). In an inverse direction, the Index correlated negatively on Impulsive Nonconformity ($r_s = -.131$) (see Table 3).

DISCUSSION

The analyses revealed a relationship between positive schizotypy and paranormal experiences for the non-paranormal group, but no correlation for the paranormal group; in line with predictions, the group with paranormal experiences and the group with a framework of paranormal beliefs) were both less cognitively disorganised. Positive but not negative schizotypy predicted paranormal experiences, also in line with predictions, with high anhedonia associated with paranormal experiences in the paranormal group.

Paranormal group members were both less cognitively disorganised and tended to have more unusual incidents in relation to their paranormal experiences. Individuals with more paranormal beliefs/experiences

may be able to cope better with the potentially distressing effects of such experiences. A limitation the present study did not examine the paranormal beliefs of the participants. However, other studies (16, 17, 18, 19) found that paranormal beliefs and experiences are strongly correlated (for a review of studies and meta-analyses, see 20). The sample of individuals in the group was composed of students a wide range of students, which may have biased the sample. We must be cautious in interpreting the results. However, future studies may improve the design and help to better understand the relationship between these variables.

For the paranormal group, individuals who have more unusual paranormal experiences may be able to 'buffer' their potentially distressing effects via the existence or construction of a framework in which to place them; for the non-paranormal group (individuals without a beliefs framework), positive schizotypy might, in fact, be adaptive, as highly magical thinking provides a better chance of creating an effective and imaginative framework to account for the odd experiences, as implied by Claridge's (8) results. For these individuals, the lack of a 'buffer' results in experiences being seen as strange and overwhelming, perhaps indicative of some disorder or 'abnormality'.

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Alejandro Parra
 Universidad Abierta Interamericana
 Salta 2015 (C1137ACQ)
 Tel. +6511 43056724
 Buenos Aires, Argentina
 rapp@fibertel.com.ar