Perceived Stress, Thinking Style and Paranormal Belief

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Abstract

Paranormal beliefs often become stronger in times of stress. Such beliefs have also been found to vary in accordance with thinking style, whereby stronger beliefs are often observed in experiential thinkers. Little research, however, has explored the interaction between perceived stress and thinking style. 82 males and females aged 18 to 62 years (mean = 29.96 ± 12.53 years) completed measures of perceived stress, thinking style (rational and experiential) and paranormal belief. The results revealed stronger beliefs in experiential thinkers, compared with those with a rational thinking style. Perceived stress alone, was not a prominent predictor of belief but the combination of stress and thinking style, specifically high perceived stress with a rational thinking style, significantly predicted greater global paranormal belief, belief in superstition, traditional religious belief, and belief in psi. High perceived stress appeared to facilitate belief in rational thinkers as conversely, belief was lowest in rational thinkers under conditions of low-perceived stress. These findings suggest that stress may lower the propensity for rational thinking and consequently, encourage belief in scientifically unsubstantiated phenomena. This interaction may have implications for coping during stressful situations.

Keywords: *Paranormal belief; perceived stress; thinking style; rational thinking; experiential thinking*

Introduction

Traditionally, paranormal belief refers to the endorsement of phenomena which are scientifically unsubstantiated (Broad, 1953; Tobacyk, Nagot, & Miller, 1988). Despite this, numerous polls have shown that many people believe in some form of paranormal phenomena (Gallup, 2012). Paranormal beliefs contain a cognitive, affective and behavioural element (Irwin, 2009) which convey what a person believes in (i.e. the phenomenon), how it makes them feel and how it may modify their behaviour. For this reason, beliefs may not always be considered beliefs but are an insight into a person's sense of reality (Zusne & Jones, 1982). The emergence of paranormal beliefs has been attributed to culture (McClenon, 1993), the media (Sparks & Miller, 2001), parental influence (Braswell, Rosengren, & Berenbaum, 2012) and individual experience (Glicksohn, 1990). It has also been suggested that beliefs can be formed via intuitive or reflective processes (Sperber, 1990). Intuitive beliefs are formed when a person makes an unconscious inference about the world, whereas reflective beliefs are formed via similar processes but with an added element of reasoning and evaluation affirmed by selected authority figures (Sperber, 1990). Thus, beliefs may differ in terms of their propensity for rationality (Irwin, 2009).

The presence of paranormal belief has previously been associated with a number of psychological states and traits. Given that beliefs may be formed via intuitive or reflective processes, the role of cognitive processes as correlates of paranormal belief has received some attention, specifically, the influence of thinking style (Aarnio & Lindeman, 2005; Lindeman & Aarnio, 2007). Originally proposed as an integrative theory of personality, the Cognitive Experiential Self Theory (CEST) (Epstein, 1990, 1994) has been previously applied to the study of paranormal belief. The CEST proposes that individuals operate by and can be classified according to a dual information-processing system, one that is slow and rational which operates at the conscious level and one that is fast and experiential which is presumed automatic (Epstein, Pacini, Denes-Raj, & Heier, 1996). Individuals characterised by a desire for logic and evidenced-based reasoning are considered

'rational'. In contrast individuals may be more emotionally led or intuitive and are deemed 'experiential' in thinking style. The thinking style typologies arising from the CEST been associated with certain beliefs, particularly, belief in the paranormal. Experiential thinkers often hold stronger paranormal beliefs than rational thinkers due to fast, unconscious and intuitive processing which is less reliant on evidence. In support of this, prior studies have found belief to correlate positively with experiential thinking and correlate negatively with rational thinking (Aarnio & Lindeman, 2005). Consequently, individuals high in rational thinking but low in experiential thinking are likely to be 'skeptics' whereas those high in both rational experiential thinking (termed complementary thinkers) or high experiential thinking are likely 'believers' (Genovese, 2005; Wolfradt, Oubaid, Straube, Bischoff, & Mischo, 1999).

The rational and experiential systems act in parallel and may interact to process information dependent on the context (Epstein et al., 1996). In most instances, the degree of interaction is harmonious but in certain contexts conflict may arise (Denes-Raj & Epstein, 1994). In particular, the operation of the system has been found to be heavily influenced by affect (Epstein et al., 1996). In line with this, experiential thinking has been found to dominate in situations of uncertainty (Klein, 1998). However, this has also been associated with greater distress in experiential thinkers in contrast to better wellbeing in rational thinkers (Burns & D'Zurilla, 1999).

Paranormal belief has also been found to vary with context. Specifically, belief often increases in times of challenge or stress, specifically, in superstitious (Keinan, 2002; Vyse, 1997) and magical thinking (Keinan, 1994). Belief in astrology has also been shown to positively correlate with the number of personal crises experienced (Lillqvist & Lindeman, 1998). The observed relationship between belief and stress suggests that paranormal beliefs may be an adaptive response to challenging or distressing situations, serving as a coping mechanism (Irwin, 1993). In line with this, the psychodynamic functions hypothesis suggests that belief in the paranormal may be needs-serving, i.e. fulfills some psychodynamic need (Irwin, 2009). Intuitively, if paranormal beliefs are

needs-serving, these beliefs may vary in strength dependent on the psychological wellbeing of the individual and that exposure to psychological stressors has the propensity to influence this. Therefore, in times of difficulty or challenge, belief or faith in some external force or entity may lessen the stress experienced. Indeed, Keinan (1994) observed an increase in magical thinking in Israeli citizens living in high-risk areas during the Gulf War. Increases in belief may reflect an attempt to regain control in uncertain situations, or more specifically, the illusion of control (Langer, 1975). Exposure to stressful situations can undermine a person's sense of control (Lazarus & Folkman, 1984) which may be re-established by activation of paranormal beliefs (Friedland, Keinan, & Regev, 1992; Keinan, 1994). These beliefs may, therefore, already be held by a person but not necessarily apparent or relevant under normal circumstances and may otherwise lay dormant until the context requires it (Irwin, 2009).

Understanding how a person thinks in terms of information processing and thinking style as well as having some measure of their psychological wellbeing can offer insight into their propensity for paranormal belief. Both stress and thinking style have separately been shown to be a correlate of paranormal belief (Aarnio & Lindeman, 2005; Keinan, 1994). Further, perceived stress may influence the degree to which someone is thinking rationally rather than experientially (Klein, 1998). The aim of the current study, therefore, was to explore possible associations between perceived stress, thinking style (rational and experiential) and belief in the paranormal. It was hypothesised that stronger beliefs would be associated with greater perceived stress and an experiential or complementary thinking style.

Method

Participants and Procedure

82 males and females (23% and 77% respectively) aged between 18 and 62 (mean age = 29.96 ± 12.53 years) took part in the survey and completed a battery of measures assessing

paranormal belief, perceived stress and thinking style. A survey was selected to target a broader range of respondents. All participants were British, 52.4% of which were students (full-time undergraduate) and 40.2% were in fulltime employment. The remaining 7.4% were employed part time or unemployed. 44% of the sample held higher education (HE) qualifications with 49% holding further education (FE) qualifications and 7% other. All participants provided full-informed consent prior to completing the measures. The study was granted ethical clearance by the in-house University Psychology Ethics Committee. Interested participants were provided with questionnaire booklets and were recruited through a University Research Participation Scheme and word of mouth.

Measures

Perceived stress was assessed using the short form (10 item) of the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983). The PSS measures the perception of and appraisal of stress and stressful situations on a five point Likert scale (0–4) from ‘‘never’’ to ‘‘very often’’ (a higher score indicating greater perceived stress). This is a widely used scale and has been shown to be reliable in previous research (Cronbach’s alpha has ranged from 0.84 to 0.86 Cohen et al. (1983)). To assess thinking style (rational versus experiential) in lieu of the Cognitive-Experiential Self Theory (CEST; Epstein (1990, 1994)), the Rational Experiential Inventory (REI) (Pacini & Epstein, 1999) was used. The REI contains 40 items, of which, 20 items assess rational thinking/ability or need for cognition (REI-R) and 20 items assess experiential thinking/ability or faith in intuition (REI-E). The REI has been found to have good structural, convergent and discriminant validity (Bjorklund & Backstrom, 2008). Cronbach’s alpha range from 0.77 to 0.87 in previous research (Handley, Newstead, & Wright, 2000). Belief in the paranormal was assessed using the revised Paranormal Belief Scale (rPBS) (Tobacyk, 2004). The scale comprises 26 items that produce seven dimensions of belief (Psi “*A person’s thoughts can influence the movement of a physical object*”, Superstition “*If you break a mirror, you will have bad luck*”, Witchcraft “*Black magic really exists*”,

Traditional Religious Belief "*I believe in God*", Spiritualism "*It is possible to communicate with the dead*", Extraordinary Life Forms "*There is life on other planets*", and Precognition "*Some people have an unexplained ability to predict the future*") in addition to a global paranormal belief score. Respondents indicate their level of belief using a seven point Likert scale ("strongly disagree" to "strongly agree"). Cronbach's alpha for the entire scale has ranged from 0.92 to 0.95 in Aarnio and Lindeman (2005); Lindeman and Aarnio (2007) and Rogers, Qualter, Phelps, and Gardner (2006). The reliabilities for each of the dimensions have ranged from 0.79 to 0.88 (Aarnio & Lindeman, 2005; Lindeman & Aarnio, 2007).

Statistical Analysis

Preliminary correlational analyses were conducted to explore the interrelationships between stress, thinking style and belief. Scores for rational and experiential thinking from the REI were entered into a K Means cluster analysis to produce three cluster groups, namely, rational, experiential or complementary thinking (complementary thinkers score high for both rational and experiential thinking) (REIgroup). To explore the predictors of paranormal belief, scores for each of the dimensions of the Revised Paranormal Belief Scale (Global Paranormal Belief, Superstition, Psi, Traditional Religious Belief, Witchcraft, Spiritualism, Extraordinary Life Forms, Precognition) were outcome variables in a series of linear multiple regressions using a backwards enter model in SPSS 21 (IBM, 2012). Age, gender, education, perceived stress score (PSS), summed rational (REI-R) and experiential score (REI-E) were entered in the first block followed by PSS group (high/low) and the newly formed variable REI group (rational, experiential or complementary). The final block consisted of the interaction terms PSS*REI-R, PSS*REI-E and PSS*REIgroup.

Results

Prior to the analysis, an assessment of model fit using confirmatory factor analysis was conducted. The original factor structure proposed by Tobacyk (2004) was assessed and fitted to the data. Following initial fit, very low loading items were removed, namely item 23 from the psi dimension and item 17 from the Witchcraft dimension. As the majority of the items were very highly correlated (an observation consistent with previous research), a common latent factor was introduced. The final factor structure showed modest fit to the data (CFI 0.935; RMSEA 0.062 and SRMR 0.061).

The internal reliability of each dimension for the rPBS was tested. Cronbach's alpha for each of the dimensions of the rPBS ranged from 0.70 to 0.88 (specifically, Psi (rPBS*psi*) .84; Superstition (rPBS*super*) .77; Traditional Religious Belief (rPBS*relig*) .85; Spiritualism (rPBS*super*) .73; Extraordinary Life Forms (rPBS*extraord*) .70 Precognition (rPBS*precog*) .81; Witchcraft (rPBS*witch*) .75) with an alpha of .88 for the scale overall (rPBS*global*). Further, Cronbach's alpha for the PSS was 0.88, and for the rational and experiential subscales of the REI, 0.91 (REI-R) and 0.89 (REI-E) respectively.

A preliminary correlational analysis was performed to explore the interrelationships between perceived stress (PSS), thinking style and belief. Pearson's correlation coefficients are presented in Table 1. Age did not correlate significantly with education or scores from the PSS, REI (both REI-R and REI-E) or any of the dimensions of belief. As expected, a higher level of education was associated with a higher rational thinking score (a low score for education indicates a higher qualification) and interestingly, greater belief in extraordinary life forms. Similarly, increases in rational thinking were also associated with greater belief in extraordinary life forms and rather unexpectedly, witchcraft. Further, as PSS increased, rational thinking decreased. Increases in PSS were also associated with greater superstitious belief, belief in spiritualism and precognition as well

as global paranormal belief. Greater experiential thinking (REI-E) was associated with higher scores on all dimensions of the rPBS except superstition and traditional religious belief and witchcraft.

Table 1 here

Predicting Belief

The final models for each dimension of the rPBS are presented in Table 2.

Table 2 here

Age was a predictor of belief in Psi whereby increases in age were associated with stronger beliefs. Gender and education were not identified as significant predictors.

REI group (a rational, experiential or complementary thinking style) significantly predicted belief in superstition whereby greater belief was observed in experiential thinkers. Greater experiential thinking (REI-E) was also predictive of greater belief in psi, spiritualism, precognition and global paranormal belief. However, and interestingly, an increase in rational thinking score (REI-R) was associated with stronger global paranormal belief, traditional religious belief and belief in witchcraft and extraordinary life forms. Perhaps consistent with this was the observation that REI group also significantly predicted global paranormal belief, traditional religious belief, belief in witchcraft and extraordinary life forms but whereby higher belief scores were observed in those with a *complementary* thinking style i.e. those who score high in *both* rational and experiential thinking.

Perceived stress was a significant predictor of belief in precognition, whereby those with high-perceived stress held greater belief. However, of greater interest was the interaction between perceived stress and thinking style. The combination of low-perceived stress with a rational thinking style was associated with significantly lower global paranormal belief whereas a rational thinking style and high-perceived stress was associated with significantly *greater* global paranormal belief

compared to a complementary or experiential thinking style and low perceived-stress. High-perceived stress and a rational thinking style was also associated with significantly greater belief in superstition and psi compared to those with a rational thinking style and low-perceived stress. Further, greater traditional religious belief was observed in those with a complementary thinking style and high-perceived stress when compared to conditions of low-perceived stress.

In summary, thinking style is an important predictor of belief in the paranormal. Specifically, experiential thinking was associated with greater belief in most dimensions of paranormal belief. In contrast, rational thinking was often associated with lower belief, especially under conditions of low-perceived stress. However, interestingly, this reversed when a rational thinking style was combined with high-perceived stress.

Discussion

The aim of the current study was to explore associations between perceived stress, thinking style and paranormal belief. It was hypothesised that stronger beliefs would be associated with higher perceived stress and an experiential thinking style. The results demonstrated that all dimensions of the paranormal belief scale except religious belief, witchcraft and superstitious belief positively correlated with experiential thinking. Further, thinking style was a significant predictor of belief in superstition and psi, in that higher scores for the dimensions of psi, spiritualism, precognition and global paranormal belief were observed in experiential thinkers.

The finding that experiential thinkers exhibited a greater endorsement of paranormal phenomena is consistent with previous research. According to the Cognitive Experiential Self Theory (CEST) (Epstein, 1990, 1994) reasoning conforms to a dual processing model. Within this model, experiential thinkers adopt a fast, intuitive and unconscious processing style with low desire for logic and analytical thinking whereas rational thinkers are more analytical and evidence-based (Epstein, 1994; Epstein et al., 1996). Thus, an experiential person is more open to phenomena which

rational thinkers would consider scientifically unsubstantiated (Aarnio & Lindeman, 2005). Despite this suggestion, a rational thinking style, however, was also associated higher belief global paranormal belief. The observation that global paranormal belief was associated with *both* rational and experiential thinking points to the possibility that these individuals are more likely to be complementary thinkers, i.e. high in both rational and experiential thinking. This is consistent with the observation that a complementary thinking style was also a significant predictor of global paranormal belief. Complementary thinkers (those high in both rational and experiential thinking) have been found to score high on measures of paranormal belief, more so than rational or experiential thinking alone (Wolfradt et al., 1999).

A lack of analytical or critical thinking, associated with experiential thinking, could be considered a consequence of a lower educational status (Musch & Ehrenberg, 2002). Educational training has been found to influence belief, with lower paranormal belief scores in those following university courses such as Medicine and Psychology compared to education, theology or vocational courses (Aarnio & Lindeman, 2005). Further, a decrease in paranormal belief among university students has been observed (Bell & Richman, 2012). However, contrary to these findings, Roe (1999) found no difference in critical thinking ability between those who believed in paranormal phenomena, those who were neutral or did not believe. More recent research suggests that it may be more pertinent to place emphasis on poor reasoning skills rather than education per se as a facet which may increase the propensity for paranormal belief (Hergovich & Arendasy, 2005). However, since only thinking style was assessed in the current study, it is not possible to confirm this suggestion and further research is consequently required.

In opposition to the suggestion that belief is associated with poor reasoning is the observation that rational thinking was a significant predictor of some dimensions of paranormal belief. In particular, greater belief in extraordinary life forms was observed in those with a higher level of education. This may be explained by the observation that for many, the idea that life exists on other

planets or that there are undiscovered species is entirely logical and rational and does not reflect a form of paranormal belief (Thalbourne & French, 1997). Further, this finding is limited by the arguably poor construct validity of this dimension of the Revised Paranormal Belief Scale (Lawrence, Roe, & Williams, 1997) in that only one item directly assesses the existence of life on other planets. This finding should, therefore, be treated with caution. The finding that rational thinking positive correlated with belief in witchcraft, and that rational thinking was also a significant predictor of belief, however, is a little more surprising. Again, this may be attributed to the construct validity of the dimension. For example, "Witches do exist" may indicate that a person believes that some people identify themselves as a witch but does not necessarily indicate that they, themselves, believe in witchcraft (Irwin, 2009; Lawrence, 1995). Without more rigorous investigation of belief in witchcraft specifically, this remains to be elucidated.

Global paranormal belief as well as belief in superstition, precognition and spiritualism positively correlated with perceived stress indicating that increases in stress were associated with greater belief. Further, greater belief in precognition was observed in those with high-perceived stress. Previous research has shown that in times of increased stress, paranormal belief also increases, specifically, superstitious and magical thinking have been found to increase (Keinan, 1994, 2002). One explanation for this is that exposure to stress increases or activates belief as a function of an individual and their desire for control (Langer, 1975). Keinan (2002) found that individuals with a high desire for control resorted to superstitious thinking when faced with stressful situations. Superstitious thinking may, therefore, serve as a means to regain control when in challenging circumstances. This aligns well with the psychodynamic functions hypothesis, which proposes that paranormal beliefs are needs-serving (Irwin, 2009) and also that this extends to other dimensions of paranormal belief than superstition alone. The activation of paranormal beliefs in this way may reflect a form of coping with stressful situations. Consistent with this, previous research suggests that belief in the paranormal may be a form of avoidant or emotion focussed coping

(Callaghan & Irwin, 2003). It has also been noted that experiential thinking is also related to emotion focussed coping (Burns & D'Zurilla, 1999). This may partially explain the link between experiential thinking and belief in the paranormal. However, coping was not measured in the current study and so this remains to be elucidated. Future research should consider the role of coping in this relationship to better understand the interplay between stress and belief.

A more interesting observation was that the combination of stress and thinking style was a significant predictor of global paranormal belief, psi, superstition and traditional religious belief. Specifically, high-perceived stress coupled with a rational thinking style was associated with stronger global paranormal belief, compared with an experiential or complementary thinking style and conditions of low-perceived stress. Further, high-perceived stress coupled with a rational thinking style was associated with stronger belief in superstition, psi and traditional religious belief when compared to conditions of low-perceived stress.

The combination of high-perceived stress and a rational thinking style may suggest that stressful situations have the power to make people more tolerant of that which cannot be scientifically explained. Indeed, the lowest scores for belief were observed in those who were rational thinkers experiencing low-perceived stress. Although (to the authors knowledge) no prior study has specifically explored the relationship between thinking style, perceived stress and belief, prior studies have shown that under stressful circumstances, tolerance of ambiguity increases and consequently, allows for increased magical thinking (Keinan, 1994). This, in turn, allows for a greater illusion of control (Friedland et al., 1992; Langer, 1975). This suggests that the way information is processed is an important factor in understanding this relationship. Information processing capability may be compromised in times of stress and hence, the brain adopts a more primitive and intuitive processing approach (Friedland et al., 1992; Keinan, Friedland, & Arad, 1991) Further, it must be noted that thinking style can fluctuate dependent on the current situation (whereby one processing system dominates). Therefore, being classified as rational does not mean a person has

no propensity for experiential thinking too (Epstein & Pacini, 1999). Flexibility in information processing presents an opportunity for external factors such as stress exposure to influence this. In particular, processing can be influenced by affect (Epstein et al., 1996) which in turn can be influenced by exposure to stressful situations. This may encourage more experiential thinking in an otherwise rational person (Klein, 1998). In line with this suggestion it is of interest to note that experiential thinkers reported higher perceived stress scores in comparison to rational and complementary thinkers. This observation suggests that context may influence thinking style and consequently, paranormal belief.

Although the current findings are of value when understanding why some individuals endorse scientifically unsubstantiated beliefs, a number of limitations should be addressed. Firstly, the data in the current study is cross sectional and cannot capture variation in stress over time and corresponding variations in paranormal belief. Future studies should explore the impact of stress exposure (experimental or otherwise) on the manifestation of paranormal belief. Further, although no gender differences were noted in the current study, the findings emerge from a predominantly female student sample. Females are more likely to endorse paranormal beliefs than males (Irwin, 1985; Schulter & Papousek, 2008). This observation has been linked to the suggestion that females are still considered a socially marginal group and more likely to endorse such phenomenon (Irwin, 1993). Greater paranormal belief is also often observed in younger adults (Emmons & Sobal, 1981) but this suggestion was not confirmed in the current study and maybe attributed to a small sample size. These observations, suggest more research is required in larger, more diverse samples to enhance generalizability.

Further, although the Revised Paranormal Belief Scale (rPBS) is one of the most widely used measures of paranormal belief, its use is not without limitation. As discussed previously, the phrasing of some items within the measure may be problematic. For example, items pertaining to superstitions are negatively worded with no inclusion of items assessing positive superstitious

thinking (Wiseman & Watt, 2004). Further, the construct validity of the Extraordinary Life Forms dimension has been questioned (Lawrence et al., 1997). Consequently, there is considerable debate as to how many dimensions the measure produces and whether the items are still up to date and valid (Irwin, 2007, 2009). In particular, the inclusion/exclusion of items pertaining to traditional religious belief is often disputed (Lawrence, 1995). Indeed, in the current study, the fit of the seven-factor model, although acceptable, was not optimal and suggests that the scale needs further refinement. Despite this, the rPBS remains one of the most widely used measures of paranormal belief.

In conclusion, the current study observed greater paranormal belief in experiential thinkers and in rational thinkers experiencing high-perceived stress. The findings suggest that stress may interact with thinking style and increase the tendency to look to such beliefs as a means to cope. This has clear implications for effective coping and reasoning during times of challenge.

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Table 1

Pearson's correlation coefficients for correlations between age and education with scores from the PSS, REI and the dimensions of the rPBS

	Age	Education	PSS	REI-R	REI-E
Age					
Education	.18				
PSS	-.15	-.03			
REI-R	.07	-.34**	-.22*		
REI-E	-.13	-.02	-.05	.01	
rPBS*global*	.04	-.11	.26*	.16	.31**
rPBS*super*	-.07	.00	.42**	-.06	-.03
rPBS*psi*	.20	-.01	.07	.16	.26*
rPBS*relig*	-.11	-.04	.07	.17	.05
rPBS*witch*	.18	-.15	-.06	.24*	.18
rPBS*spirit*	.06	-.06	.24*	.13	.34**
rPBS*extraord*	.08	-.25*	.01	.24*	.27*
rPBS*precog*	-.14	.05	.29*	-.11	.36**

Note: *p<0.05 **p<0.01

Table 2

Final models for each dimension of the rPBS

Outcome Variable	**Predictors in the final model**	***B***	***Standard error B***	***β***	***t***	***p-value***
rPBS*global*	REI-R	4.791	2.163	.246	2.215	.030*
	REI-E	6.271	2.592	.294	2.419	.018**
	REI Group	-16.544	5.091	-.515	-3.250	.002**
	REI*PSS	9.920	1.918	.642	5.171	.000**
rPBS*super*	Gender	.623	.327	.193	1.901	.061
	REI Group	-.761	.262	-.392	-2.905	.005**
	REI*PSS	.531	.124	.569	4.271	.000**
rPBS*psi*	Age	.024	.010	.240	2.311	.024*
	REI-E	.463	.135	.397	3.415	.001**
	REI*PSS	.206	.097	.244	2.120	.037*
rPBS*relig*	REI-R	.360	.173	.248	2.080	.041*
	REI Group	-.860	.372	-.360	-2.310	.024*
	PSS*REI-R	.033	.019	.196	1.792	.077
	REI*PSS	.332	.166	.289	2.003	.049*
rPBS*witch*	Age	.024	.013	.197	1.877	.064
	REI-R	.480	.152	.368	3.150	.002**
	REI Group	-.941	.331	-.437	-2.843	.006**
	REI*PSS	.261	.145	.253	1.804	.075
rPBS*spirit*	REI-E	.624	.146	.473	4.283	.000**
	PSS Group	.678	.354	.243	1.915	.059

	REI*PSS	.242	.135	.254	1.794	.077
rPBS*extraord*	REI-R	.400	.124	.381	3.235	.002**
	REI Group	-.774	.267	-.446	-2.904	.005**
	REI*PSS	.211	.117	.253	1.794	.077
rPBS*precog*	REI-E	.704	.171	.392	4.103	.000**
	PSS Group	1.505	.363	.397	4.153	.000**

Note: *p<0.05 **p<0.01