



## PERCEIVED LUCKINESS, STYLE OF COGNITION AND ABSORPTION, AND THEIR RELATION WITH PREMONITIONS IN DREAMS

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### ABSTRACT

The main aim of this study was to examine the proportion of people in Argentina who claim to have had more than one premonition in a dream and to explore comparisons between them and those who report one or less premonitions on cognitive and perceptual variables. From 265 questionnaires 234 (88%) were completed. Along with demographic information these contained information based on premonition experiences, beliefs about luck, locus of control, cognitive style and absorption. Participants were classified as either *Experients* (i.e., > 1) or *Controls* (i.e., 1 or <). Comparisons between the two groups revealed that *Experients* were less intuitive compared to *Controls* but scored higher on absorption. However, *Experients* were not significantly higher on the locus of control or a measure assessing belief in luck. Overall, the results suggest that people who tend to have premonitions in dreams may be prone to high levels of absorption and may act to amplify minor somatic symptoms leading to an increased risk of conditions associated with hypersensitivity to internal bodily sensations, during which a person's contact with reality may be blurred and partially substituted by a visionary fantasy, in which many premonition experiences also may occur.

### INTRODUCTION

A questionnaire was used in a previous study (Parra, 2013) to collect information on spontaneous premonition experiences to determine the proportion of people in Argentina who claim to have had various kinds of premonition experiences. The aim was also to discover any relationship between these experiences and other variables, such as content, topics, symbols, clearness, vividness, emotional variables, and sensory modalities, and whether people could discern normal from paranormal explanations for their premonitions. The dreamers in this prior study reported that their premonitions were vivid, clear, and emotionally intense. Premonitory dreams were reported to be clearer than usual dreams. More than half the participants who reported premonitions during waking states, reported feeling anxious, but many expressed feelings of happiness and relief. The information obtained in the survey is of value to parapsychology both as a source of sociological information, and as a possible source of potential hypotheses about the nature of the experiences considered.

In a follow-up study using the same sample Parra (2015) explored associations between these experiences and a range of individual measures. This included personality variables such as neuroticism and extraversion. In addition, possible differences in empathy, and schizotypy were examined on dream related premonition

experiences and on non-dream related premonition experiences for experiencers (i.e., those reporting such experiences) vs. non-experiencers. Participants who reported premonitions had higher scores on empathy and schizotypy, but were not significantly higher on neuroticism and extraversion, although they did endorse more positive indicators of schizotypy (i.e., unusual experiences) and cognitive empathy, such as emotional comprehension. Although schizotypy personality traits were associated with premonition experience, experiencers and non-experiencers did not differ in its negative dimensions.

A large proportion of the general population believes that dreams can provide information about future events that could not have been obtained by any known means (Rattet & Bursik, 2001; Schredl, 2009). Stowell (1997, p.163) defines a precognitive dream “as a dream that seemingly includes knowledge about the future which cannot be inferred from actually available information”, and for Dossey (2009), premonitions serve as a survival function. Precognitive experiences can occur in dreams, and such dreams are also considered paranormal inasmuch as some of the dream details give information about future events normally unknowable to the experiencer (Orme, 1974).

For example, Valášek and Watt (2015) identified several factors associated with precognitive dream belief and experience. Based on the analysis of the sleep-related variables, women were more likely to believe in and experience precognitive dreams and a high frequency of these experiences was associated with erratic sleep patterns and sleep medication use. In a similar vein, Watt, Ashley, Gillett, Halewood and Hanson (2014) examined the role of selective recall in precognitive dream experiences. This study found significant correspondences between dreams and news event pairs. These studies illustrate the operation of mechanisms that, when present in individuals having dreams and experiencing subsequent events, would tend to lead to an increase in the number of experiences of a seeming coincidence between dreams and events that can be interpreted as precognitive (see also Watt, 2014). However, little direct attention has been given to the relationship between the perceived role of luck in a person's life, locus of control, style of cognition and the level of psychological absorption with regards to such premonition experiences.

### *Perceived Luck*

The term luck for specific event outcomes may hide a degree of unconscious psychic intervention at work, either in the service of the person, as in the case of good luck, or against them, as with bad luck. This model has been favoured among parapsychologists in explaining the possible psi component of luck (e.g., Broughton, 1991; Smith, Wiseman, Machin, Harris & Joiner, 2000; Taylor, 2003; Watt & Nagtegaal, 2000), probably because it is highly ecologically valid as an explanation. Research has shown that the majority of people consider luck to have some importance in their lives and that dreaming plays an important role in luck (Smith et al., 2000; Smith, Wiseman, Machin, Harris, & Joiner, 1997).

Irwin (2000) found a positive relationship between global belief in luck and belief in precognition in Australian adults who participated in a mail survey of paranormal beliefs and belief in good luck. However, the terms "good luck" and "bad luck" are often used by people in a much more subjective manner as attributions for the cause

of life events that are merely difficult to predict or control. In the latter context luck may be equated by many people not with chance, but rather with a more magical or supernaturalistic mechanism (Irwin, 2000; Pepitone & Safflotti, 1997).

People are also motivated to seek explanations for lucky events, sometimes using their own experiences from a dream. Such events are commonly interpreted to be nothing more than mere chance coincidences or accidental occurrences. Thus, when they do occur there is no need to seek an explanation for why they happened. Nevertheless, premonition dreams, may provide an alternative explanation for perceived luckiness, for at least some experiences of good fortune, in which events occur according to a predetermined plan.

### *Locus of control*

Locus of control (LOC) is the degree to which people believe that they have control over the outcome of events in their lives, as opposed to external forces beyond their control (Rotter, 1966). This is conceptualized as either internal, that is those people who believe they can control their life, or external, meaning they believe their decisions and life are controlled by environmental factors which they cannot influence, or that chance or fate controls their lives. Individuals with a strong internal locus of control believe events in their life derive primarily from their own actions: for example, when receiving exam results, people with an internal locus of control tend to praise or blame themselves and their abilities.

Groth-Marnat and Pegden (1998) found that a greater external locus of control was associated with greater overall number of paranormal beliefs, especially precognition. In addition, Blagrove and Hartnell (2000) observed that frequent lucid dreamers have been shown to be more internal than are non-lucid dreamers, indicating a continuity between styles of waking cognition and dreaming.

Furthermore, those who frequently recall their dreams, including precognitive ones, have been shown to have a more internal LOC than those who do not recall their dreams (Blagrove & Hartnell, 2000). As dream recall involves a greater level of self-focused attention and is a cognitive skill that can be improved by attentional and mnemonic techniques learned when awake (see Purcell, Mullington, Mott, Hoffmann & Pigeau, 1986) it is possible that there may be an association between dream recall and the Need for Cognition (NFC). NFC is the intrinsic motivation used to engage in and enjoy effortful cognitive tasks, especially in contexts with minimal external incentives during which a person's contact with reality may be blurred and partially substituted by a visionary fantasy— in which premonition experiences may also occur (Thompson, Chaiken & Hazlewood, 1993).

### *Style of Cognition*

Historically, psychologists have been reluctant to acknowledge intuition as a viable construct, often consigning it to the 'fringes' of the field of psychology, within parapsychology (see e.g. Claxton, 2000; Klein, 2003) and equating it to esoteric and 'New Age' thinking (Boucoulvas, 1997). A number of authors have investigated the idea of rational versus intuitive thinking and how this might relate to paranormal beliefs (e.g., Irwin & Young, 2001).

In support of a relationship between intuitive thinking and paranormal beliefs, Aarnio and Lindeman (2005) found that higher intuition and lower analytical thinking contributed to higher belief, more so in women than in men. They also found that superstitious individuals accepted more violations of core ontological distinctions than skeptics did, and that ontological confusions discriminated believers from skeptics better than intuitive thinking, analytical thinking, or emotional instability (see also, Lindeman & Aarnio, 2007). In addition, these superstitious individuals were more likely to report paranormal beliefs, paranormal experiences, and subjective paranormal ability than were those who expressed either intuitive or rational thinking only (Wolfradt, Oubaid, Straube, Bischoff & Mischo, 1999).

### *Absorption*

A third variable of interest in this context is psychological absorption, which is the capacity to focus attention exclusively on some object to the exclusion of distracting events. It refers to a state of heightened imaginative involvement in which an individual's attentional capacities are focused in one behavioural domain, often to the exclusion of explicit information processing in other domains (Tellegen & Atkinson, 1974). In addition, persons scoring high on absorption also report a high incidence of subjective paranormal experiences, such as apparitions (Parra, 2006) and aura vision (Parra, 2010), and it is often reflected as a perceptual trait of many paranormal experiencers and psychic claimants (Parra & Argibay, 2012). Moreover, several other studies have related ESP and other parapsychological experiences to absorption (Alvarado & Zingrone, 1994; Glicksohn, 1990).

Although no studies have examined the relationship between precognitive dreams and absorption, the positive correlation between absorption and dream recall frequency is usually accounted for by the idea that high absorbers experience their dreams more vividly and thus remember them more easily than low absorbers (see Schredl & Montasser, 1996). In another line of research, Schonbar's (1965) life style hypothesis postulated that people who recall many dreams are generally interested in dreams, in trying to understand them, in increasing their dream recall frequency and tend to have an overall positive attitude towards dreams. Almost every study having evaluated the relationship between people's attitude towards dreams and dream recall frequency has found a positive correlation (e.g. Belicki, 1986; Cernovsky, 1984; Schredl & Doll, 2001). Consequently, it is now generally accepted that dream recall frequency is related to attitude towards dreams, although the direction of the causality remains unclear (see Beaulieu-Prevost & Zadra, 2007).

### *Aims & Predictions*

The main aims of this study were to describe the proportion of people in Argentina who claim to have had various kinds of premonitions in dreams and to explore possible differences between dreamers and non-dreamers (control) in terms of cognitive and perceptual variables, such as beliefs about luck, locus of control, cognitive style and absorption. It was predicted that experiencers (i.e., those who claim to have experienced more than one premonition in a dream) will have: (1) higher levels of belief in luck, (2) tend to have more internal locus, (3) a more intuitive than

analytic cognitive style, and (4) report higher levels of absorption compared to non experiencers.

## METHOD

### *Participants*

From a total of 265 undergraduate students recruited from a single university in Buenos Aires, Argentina, 234 (89%) usable questionnaires were received back. This sample comprised of 188 (80%) females and 46 (19%) males, ranging in age from 17 to 64 years ( $M = 26.57$  years;  $SD = 9.63$ ).

### *Categorization Procedure*

The following criteria was used to split the sample into two groups, based on their responses to the Premonition Experiences Questionnaire (PEQ: see below). Those who indicated “Sometimes” and “Multiples times” in terms of frequency of premonitions in dreams were categorized as *Experiencers* ( $N = 77$ ; 67, 87% females and 10, 13% males;  $M_{Age} = 26.55$  yrs.) and those who indicated “Never” and “One Time” were categorised as *Controls* ( $N = 157$ ; 121 (77%) females and 36 (23%) males;  $M_{Age} = 26.59$  yrs.). The *Controls* included those who reported only one premonition experience (14.3%) as this may have been a mere coincidence.

### *Materials*

*Premonition Experiences Questionnaire (PEQ)*. The PEQ is a self-report questionnaire that assesses spontaneous premonition experiences and was developed by the Institute of Paranormal Psychology (see, Gómez Montanelli & Parra, 2004). The questionnaire consists of two parts. The first part (items 1 to 1.8) explores ‘Premonitions in dreams’, and the second part (items 2.1 to 12) covers ‘Premonitions not related to dreams’ which are premonition-like waking experiences. If participants answered ‘Never’ to item 1, they moved to the second part. For the present study, the ‘Premonition in dreams’ component was used to classify participants as *Experiencers* (i.e., those reporting a frequency of  $>1$ ) and *Controls* (i.e., those with 1 or less).. The remaining eight sub-scales include, Content of the premonitions (‘Deaths’, ‘Serious events’, and ‘Trivial events’); Symbolic nature (‘difficult to interpret’, ‘easy to interpret’, ‘very real events’, or ‘no images’) during which a person's contact with reality is blurred and partially substituted by a visionary fantasy– in which many premonition experiences may also occur; Vividness (‘Clearer than my usual dreams’ to ‘Less clear than my usual dreams’); Clearness (‘Perfectly clear and intense’, to ‘So vague and diffuse they are impossible to discern’); Emotional intensity (‘Not intense’ to ‘Very intense’); the ability to Discern a premonitory dream (‘Never’ to ‘Every time’); Time range (‘Minutes’ to ‘Years’); and People involved (e.g., ‘Mother/Father’, ‘Brothers/Sisters’). The questionnaire has a good reliability, with a reported Cronbach’s alpha coefficient of .80 (Gómez et al., 2004).

*Questionnaire of Beliefs about Luck (QBL)*; Luke, Sherwood & Delanoy, 2003) is a 41 item questionnaire, scored on a seven point Likert scale from strongly disagree to strongly agree. It can be used to assess belief in four polar concepts of luck: Luck (i.e., Luck is primarily controllable, but also internal, stable and non-random), Chance (Luck is random, unpredictable, unstable and inert), Providence (Luck is reliably

managed by external higher beings or forces), and Fortune (Luck is meant as a metaphor for life success rather than as a literal event). Each subscale has ten items scoring from 1 to 7, with higher scores indicating greater levels of belief in luck and lower scores indicating lower levels of beliefs in luck. The internal reliability of the *QBL* is good, with a Cronbach's alpha coefficient of .83 (Luke et al., 2003).

*Locus of Control –Spanish Version* (LOC; Oros, 2005) is a 29 item self-report inventory. Each item of this scale requires a 'true' (1) or 'false' (0) response and produces a score that indicates those with higher scores tend to have an external locus of control and those with lower scores tend to have an internal locus. Individuals with a predominant external locus of control believe that the events in their life are primarily a result of outside forces (e.g. other people, fate, chance) acting upon them, whilst those with an internal locus of control believe that events in their life are a result of their own actions. The internal reliability is good, with a Cronbach's alpha coefficient of .92 (Oros, 2005).

*Cognitive Style Index* (CSI; Allinson & Hayes, 1996) is a 38 item self-report questionnaire with a three point scale measuring intuition and analysis in cognitive style in its original version. There are twenty one analytic items which are scored according to the following scheme: True = 2, Uncertain = 1, False = 0. Scores are computed by adding the individual's scores for all thirty eight items with the result that those with high scores tend to be analytical and those with lower scores tend to be more intuitive. The nearer the total CSI score to the theoretical maximum of 76, the more analytical the respondent (i.e. being risk taking, serialist, reflective, sensing, rational, and high tolerance of incongruity), and the nearer the total score to the theoretical minimum of zero, the more intuitive the respondent (i.e. being cautious, holist, impulsive, intuitive, and low tolerance of incongruity). The internal reliability of the *CSI* is good, with a Cronbach's alpha coefficient of .93 (Allinson & Hayes, 1996).

*Tellegen Absorption Scale* (TAS; Tellegen & Atkinson, 1974) is a 34 item self-report inventory. Each item of this scale requires a 'true' (1) or 'false' (0) response and produces a score that ranges from 0 to 34, with a high score associated with greater levels of absorption. The internal reliability of the *TAS* is good, with a Cronbach's alpha coefficient of .90; test retest reliability has also been found to be acceptable of the Argentine Spanish version (Tellegen & Atkinson, 1974).

### *Procedure*

Participants were invited to complete the questionnaire in a single session, selected from days and times previously agreed upon with the teachers, who were in class at the time where the questionnaires were distributed. The four questionnaires were given under the pseudo-title *Questionnaire of Psychological Experiences* in a counterbalanced order to encourage unbiased responding (*Premonition Experiences Questionnaire* was inserted first). They were asked not to write their names on the questionnaire to preserve anonymity. They also received information about the aims of the study and were given information about the premonitions and paranormal dreams in general.

### *Ethical Consent*

All participants were informed that the study was examining information on their dreaming experiences. They all signed an appropriate consent form and were made aware that they were free to decline to participate. Participation was voluntary and no payment was made to anyone taking part. All data collected were treated confidentially.

### *Data Analysis*

The sample was split according to whether respondents reported premonitions in dreams (i.e., *Experiencers*) or not (i.e., *Controls*). Nonparametric statistics (Mann-Whitney *U* for both groups, and Spearman's *Rho* for correlations) were used, since the scores were not normally distributed when assessed using a Kolmogorov-Smirnov test. The data were exported to a statistical package (*SPSS 20*).

## RESULTS

### *Descriptive Findings*

Participant's responses on the PEQ were examined in terms of each of the following sub-groups.

*Frequency.* As Table 1 indicates, one hundred thirteen (48.3%) participants answered they had premonitions in dreams, 67 (28.6%) experienced premonitions in dreams *Sometimes* and 10 (4.3%) *Multiple times* (both  $n = 77$ ).

Table 1  
*Showing Frequency of Premonitions in Dreams*

<i>Variable</i>	<i>N</i>	<i>%*</i>
<i>Q1: Frequency</i>		
Never	121	51,7
One single	36	15,4
Sometimes	67	28,6
Multiple times	10	4,3
[Yes, sub-total]	113	48.3
Total	234	

\*% is a function of the total ( $N=234$ )

*Content and Symbols.* As Table 2 indicates, of the 77 participants who answered they had premonitions in dreams, trivial events in their dreams were the most common premonition ( $n = 36$ ; 15.4%) compared to death and other serious events. Forty three (18.4%) of the 77 experienced symbols of some kind, 28 (12%) were real events that took place as they dreamed them.

*Vividness and Clearness.* Fifty three participants (22.7%) reported that vividness was *moderately to perfectly* clear and intense; and 24 participants (10.3%) expressed some degree of vagueness, lack of clarity, or diffuseness in their symbols/images. Of the same 77 participants, 43 (18.4%) reported that their premonitory dreams were *as clear as their usual dreams*.

Table 2

*Frequency of Content, Symbols, Vividness, Clearness, Emotional intensity, Discern normal/paranormal explanations, Time range and People involved*

<i>Variable</i>	<i>N</i>	<i>%*</i>
<i>Q1.1: Content</i>		
Deaths	15	6.4
Serious events	26	11.1
Trivial events	36	15.4
<i>Q1.2: Symbols</i>		
Symbols difficult to interpret	14	6.0
Symbols easy to interpret	29	12.4
Very real events that took place as I dreamed them	28	12.0
No symbols. I just knew what was going to happen	6	2.6
<i>Q1.3 &amp; Q4: Vividness</i>		
Perfectly vivid and intense	14	6.0
Moderately vivid and intense	39	16.7
Unclear but vivid	21	9.0
Vague and diffuse	3	1.3
So vague and diffuse they are impossible to discern	0	0
<i>Q1.4: Clearness</i>		
Clearer than my usual dreams	16	6.8
As clear as my usual dreams	43	18.4
Less clear than my usual dreams	18	7.7
<i>Q1.5: Emotional intensity</i>		
Not intense	2	0.9
A little intense	10	4.3
Moderately intense	47	20.1
Very intense	18	7.7
<i>Q1.6 &amp; Q6: Discern normal/paranormal explanations</i>		
Never	8	3.4
Rarely	15	6.4
Occasionally	35	15.0
Every time	19	8.1
<i>Q1.7 &amp; Q7: Time range</i>		
Minutes	3	1.3
Hours	8	3.4
Days	37	15.8
Months	21	9.0
Years	5	2.1
<i>I cannot to discern</i>	3	1.3
<i>Q1.8 &amp; Q8: People involved</i>		
Acquaintances	44	18.8
Relatives (others)	37	15.8
Friends	32	13.7
Mother/Father	16	6.8

Unknown people	16	6.8
Brother/Sister	15	6.4
Wife/Husband	5	2.1
Sons/Daughters	2	0.9

\*% is a function of the total (N=234)

*Emotional intensity, premonitory/normal dream discernment, and time range.* Sixty five participants (27.8%) reported their premonitory dreams to be “moderately” to “very intense” emotionally, and 54 (23.1%) participants discerned premonitory dreams from normal dreams *occasionally to every time*. For 37 (15.8%) of the 77 participants, the time range (i.e., lag) from premonition to event was in days.

*People involved, and relatives who had premonitory experiences.* Of the 77 participants reporting premonitory dreams, the majority of participants ( $n=44$ ; 18.8%) reported that the people involved in the dreams were acquaintances.

### Comparisons

Hypothesis 1, that *Experients* would score higher on beliefs about luck than *Controls* was not supported. Hypothesis 2, that *Experients* would score lower (i.e., more internally focused) on locus of control compared to *Controls*, was not supported. Hypothesis 3, that experients would be more intuitive (in cognitive style) than analytic, was contradicted by the fact that they actually scored significantly higher, suggesting a more analytic style and Hypothesis 4, that *Experients* would score higher on absorption was supported (see Table 3).

Table 3

*Comparisons of cognitive and perceptual scores between Controls and Experients*

	Control ( $n = 157$ )		Experients ( $n = 77$ )		U MW	p
	Mean	SD	Mean	SD		
1. Belief in Control	25.66	5.17	26.26	4.91	5405,5	.57
2. Belief in Chance	25.09	5.65	26.08	5.27	5242,5	.36
3. Belief in Providence	21.41	5.83	22.39	5.23	5182,0	.29
4. Belief in Fortune	21.26	5.07	21.36	4.21	5538,0	.78
<i>Beliefs about Luck</i>	96.03	18.00	98.82	13.46	5238,0	.35
<i>Locus of Control</i>	11.66	2.69	11.84	2.20	5416,5	.70
<i>Cognitive style</i>	114.40	13.64	119.50	11.39	3331,5	.004*
F1. Sensibility	3.23	1.85	3.94	1.93	3293,0	.018
F2. Synesthesia	3.08	1.79	4.07	1.80	3293,0	.001**
F3. Expanded awareness	3.35	1.75	4.33	1.72	3280,5	.001**
F4. Dissociation	2.67	1.51	3.30	1.44	3602,5	.004*
F5. Vivid memories	2.56	1.10	3.19	1.73	3618,0	.003*
F6. Expanded Consciousness	1.58	1.11	2.12	1.06	3377,5	.001**
<i>Absorption Scale</i>	16.47	6.55	20.96	6.19	2918,0	.001**

\* $p < 0.05$ , \*\* $p < 0.001$

Table 4

*Correlations between Belief about Luck, Locus of Control, Cognitive Style and Absorption for Controls and Experiencers*

	<i>Beliefs about</i>				<i>Absorption</i>	
	<i>Luck</i>		<i>Locus</i>		<i>Control</i> ( <i>n</i> = 157)	<i>Experiencers</i> ( <i>n</i> = 77)
	<i>Control</i> ( <i>n</i> = 157)	<i>Experiencers</i> ( <i>n</i> = 77)	<i>Control</i> ( <i>n</i> = 157)	<i>Experiencers</i> ( <i>n</i> = 77)		
<i>Locus</i>	$r_s = -.87$	$r_s = -.20$				
<i>Absorption</i>	$r_s = .36^{**}$	$r_s = .19$	$r_s = .01$	$r_s = .12$		
<i>Cognitive style</i>	$r_s = .20^*$	$r_s = .19$	$r_s = -.09$	$r_s = .18$	$r_s = .17^*$	$r_s = .49^{**}$

\* $p < 0.05$ , \*\* $< 0.001$

A number of exploratory correlations were carried out on scores of Belief about Luck, Locus of Control, Cognitive Style and Absorption between Experiencers ( $n = 77$ ) and Controls ( $n = 134$ ). These can be seen in Table 4 above.

## DISCUSSION

The main aim of this study was to describe people who claim to have had various kinds of premonitions in dreams. It seems reasonable to expect that in all cases premonitions should involve strong emotional reactions with good clarity (see, Houran & Lange, 1998; Schredl, 2009; Thalbourne, 1984) since persons who barely (if at all) recall the content of their dreams and have little or no reaction to them, are not likely to recall or benefit from precognitive dreams. Furthermore, we may expect strong relationships between precognitive dreams and (i) positive attitudes towards parapsychological phenomena (e.g., Gómez Montanelli & Parra, 2004; Houran & Lange, 1998; Schredl, 2009), and (ii) empathy in regard to close (e.g. maternal) relationships (Parra, 2013), which may extend to acquaintances.

The time lag from the dream premonition event up to the actual event occurring in real life (i.e., actualisation) was more often measured in days and the participants involved in the dreams tended to be 'Acquaintances'. This finding compares with that of Sondow (1988), who found an exponential relationship between dream precognition and the time interval, where about 41% of the dreams were linked to an event the following day. It is not clear whether the time lag has anything to do with relationship of the person in the premonition or to the one having the premonition.

Participants reported that their dream premonitions were vivid, clear, and emotionally intense. While a majority of premonitory dreamers reported the vividness of their premonitions were vivid and intense, premonitory dreams were no clearer than usual dreams. This latter, somewhat puzzling finding could be explained by the fact that many premonitory dreams have no symbols and/or the symbols are difficult to interpret and/or many of them involve trivial events —the dreams may also be of insufficient intensity to be recognized as precognitive dreams.

A secondary aim was to explore possible differences between *Experiencers* and *Controls* on a range of cognitive and perceptual variables. It is interesting, however,

that *Experients* were not significantly higher in their belief about luck and did not have a more internal LOC. In contrast to the prediction, the relationship between intuitive thinking style and premonition experience showed the sample of the present study to have a more rational and analytical rather than an intuitive thinking style. Prior research investigating the differences between psychic claimants and control groups has shown that psychic claimants tended to have more positive attitudes; their thinking was action-oriented; they were good behavioural copers and were more accepting of others, but they can be more rigid in their thinking than non-psychic claimants (Parra, 2011). Like dreams, intuitive flashes are frequently dismissed as illusory, imaginary, or at least irrelevant perception.

Finally, in line with the prediction the *Experients* did show higher levels of absorption. The state of absorption could be associated with precognition in dreams, the focal object of attention, even if imaginary, as it becomes totally real to the experiencer. In fact, absorption can facilitate premonitions in dreams as a positive experience including the enjoyment of music, art, and natural beauty and pleasant forms of daydreaming –short-term detachment from one's immediate surroundings, during which a person's contact with reality is blurred and partially substituted by a visionary fantasy– in which many premonition experiences may also occur (see, Dossey, 2009; Roche & McConkey, 1990). Capacity for absorption also appears to be only one of a constellation of related factors. Many premonition experiences (via dreams or in a waking state), may act to amplify minor somatic symptoms leading to an increased risk of conditions associated with hypersensitivity to internal bodily sensations.

People who tended to have premonition dreams may also be prone to high absorption and to personality traits associated with responsiveness to engaging and inductive stimuli, imagistic thought, ability to summon vivid and suggestive images, cross-modal experiences (synesthesia), and dissociation, associated with differential responses to other procedures for inducing altered states of consciousness (see e.g., Glicksohn & Barrett, 2003). Absorption models propose that people who are prone to vivid and unusual experiences during the day, such as fantasy and daydreaming, will tend to have vivid and memorable dream content and hence will be more likely to remember their dreams. It is probable that premonition dreams are involved in such positive experiences and may also be associated with people's interests in areas such as meditation and the subjective awareness of internal bodily sensations (see, Parra, 2006, 2010). One correlation showed that *Experients* who scored higher on Absorption tended to be more “analytical” than “intuitive”. However, *Controls* who scored higher on beliefs about luck not only tended to be more “analytical” than “intuitive” but also tended to score higher on Absorption. Although one of the aims of the study was to ascertain levels of premonition in Argentina, this was an undergraduate student sample (i.e., it may not be representative of the general population) which was a limitation for the present study. Secondly, a categorical measure –comparing experiencers with non-experiencers was used.

That no significant differences were found between *Experients* and *Controls* on perceived luckiness and locus of control is difficult to interpret. Nevertheless, one potential answer could be due the theoretical construct of the measure used to assess belief in luck. For example, Beaulieu-Prevost, Charneau-Simard and Zadra (2009)

found that “being lucky” in dreams reflected the perceived emotional aspects of peoples’ dream content in general. That is, individuals with high scores on this scale tended to view the content of their dreams as being usually positive, in fact, men tended to report higher levels of *Dream positivity* than did women in their study. As such, is it possible that potential gender differences may exist and in this instance may have influenced the scores on belief in luck. This is something future research could attempt to clarify. Regarding LOC, there may be a distinction between those who frequently recall their dreams and those that identify their dreams as precognitive. With the latter group not necessarily exhibiting an internal LOC. This again is something future studies could explore to learn more about how these variables contribute to premonitions (rather than looking at differences between experiencers and non-experiencers). Finally, a qualitative approach might offer a more in-depth exploration of these types of experiences.

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