

## OUT-OF-BODY EXPERIENCES AMONG READERS OF A SPANISH NEW AGE MAGAZINE

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### ABSTRACT

A survey was conducted among readers of a Spanish New Age magazine to study the features of out-of-body experiences (OBEs). It was hypothesized that there would be significant positive relationships between a measure of the number of OBE features per case and OBE frequency, claimed capacity to induce the OBE at will, and the frequency of dream recall, lucid dreams, and parapsychological experiences. A questionnaire of parapsychological experiences was printed in a Spanish magazine for New Age and paranormal topics. Four hundred and ninety-two questionnaires were received. Out of 486 questionnaires with information about OBE incidence, 400 or 82% claimed to have had OBEs. There was no significant difference between the proportion of OBEs reported by men and women. Most of the predictions were confirmed. The results of the analyses of OBE frequency and OBE control seem consistent with Blackmore's theoretical model of the OBE which assumes that practice in the changing of cognitive maps should affect the content of the OBE.

### INTRODUCTION

One of the most interesting aspects of the study of out-of-body experiences (OBEs) is the variety of features of the experience. Many experients see their physical bodies; others see lights, tunnels, and spiritual entities. Although most claim that they stay in their usual surroundings, some say that they go to other places or dimensions. These, and many other features, have received some attention but unfortunately they have not been systematically studied (as argued by Alvarado, 1997). There have been many autobiographical accounts of the experiences of those individuals who have had recurrent OBEs that present useful information about OBE features (e.g., Fox, 1939; Harary, 1978; Monroe, 1971; Moon, 1995; Muldoon & Carrington, 1929; Peterson, 1997). In addition, the case collections of Crookall (1961, 1964, 1972, 1978) and Muldoon (1936; Muldoon & Carrington, 1951) have offered many examples of the features of OBEs. More recently a variety of questionnaire studies have offered even more systematic perspectives about the incidence of OBE features (Alvarado, 1984; Blackmore, 1984a; Brelaz de Castro, 1998; Gabbard & Twemlow, 1984; Giovetti, 1983; Green, 1968; Irwin, 1985; Osis, 1979; Poynton, 1975). One of us has argued that regardless of this interest there is still much to be studied about OBE features (Alvarado, 1997). This includes the inter-relationships between features and the factors that affect the incidence of particular features. Although some work along these lines has been conducted by other researchers (Green, 1968; Irwin, 1985) and by us (Alvarado, 1984, 1994; Alvarado & Zingrone, 1997, in press), we believe that one of the priorities of future OBE research should be a thorough exploration of the correlates of OBE features (as outlined in Alvarado, 1997). The study reported here provided an opportunity to explore aspects of OBE features with a large

sample drawn from a special group: readers of a popular New Age magazine published in Spain. This included relating OBE features to a variety of variables such as single versus multiple experiences, experiences at will versus experiences not at will, dream, and parapsychological experiences.

It must be recognized from the beginning that the sample of this study was clearly not representative, because the participants were presumably highly interested in and used to parapsychological experiences. In addition, it was clear from the questionnaire we used (see Appendix) that the main interest of the study was OBEs, thus inflating even further the incidence of OBEs.

In what follows we will outline the predictions of the study. Most of the analyses refer to an OBE Feature Index to be described later. This is a measure of the combined presence of several OBE features in each individual who reported an OBE. In this sense we followed on some of the analyses conducted in a previous study (Alvarado & Zingrone, in press).

### *Single Versus Multiple OBEs*

Blackmore (1982) has postulated that the OBEs of people who have had the experience many times would be more complex than those who have had only one OBE. She felt that this would be so because the multiple OB-experients may have learned through practice to manipulate their cognitive maps with greater efficiency. These effects may be reflected in the tendency to present multiple experiences with a greater variety of features than single OBEs. In the previous study (Alvarado & Zingrone, in press) this comparison was not significant, but the sample size was low. Because it was worth exploring this hypothesis again with a larger sample, we hypothesized that multiple OBEs in the present study would obtain a higher index of features than single experients. A similar prediction was made using a continuous measure of frequency of experiences. That is, we predicted that a significant positive correlation would be found between the OBE Index and the frequency of experiences per participant.

### *Wilful OBEs*

Closely related to the concept of frequency of OBEs and to Blackmore's ideas is the exploration of possible differences between those people who can induce the experience at will and those who have had it without any wilful induction. As argued before, within Blackmore's (1982, 1984b) model practice may bring changes in the experience. But there is also the possibility that those who can induce the experience have different cognitive characteristics. In view of Blackmore's ideas, we hypothesized a positive and significant correlation between a continuous measure of OBE control and the index of OBE features. Similarly, we expected to find higher OBE Feature Index scores in individuals classified as having had wilful or voluntary OBEs, as compared with those who have had only spontaneous ones.

We also predicted that wilful induction of OBEs would be positively related to a variety of experiences, mainly parapsychological experiences, lucid dreams and dream recall. This made sense considering that, as reviewed elsewhere (Alvarado, 1986, in press; Irwin, 1985), these variables are generally positively related to OBE incidence.

### *Dream and Parapsychological Experiences*

Another purpose of this research project was to study the relationship of OBE features to psychological variables. In the past, most studies attempting to relate psychological variables to the OBE have been limited to the examination of a particular psychological variable and its relationship to the OBE as a unitary experience (for reviews see Alvarado, 1986, in press; Irwin, 1985). That is, experiencers have been compared with non-experiencers on their scores on a particular psychological questionnaire. The issue of a correlation between OBE features and individual psychological aspects has been neglected, with the exception of work reported by Alvarado (1984) with vividness of visual imagery and by Irwin (1985) with absorption. Provided some correlations can be established, such work will allow us to argue more effectively that the 'construction' of the OBE (at a cognitive level or otherwise) may be related to particular psychological variables. This, in turn, can support or refute particular OBE models, such as Irwin (1985) has done in his examination of his synesthetic model of the OBE. Following on previous research showing significant positive relationships between dream experiences, parapsychological experiences, and OBE incidence (e.g., Alvarado, Zingrone & Dalton, 1996; Kohr, 1980; Palmer, 1979; for more detailed reviews see Alvarado, 1986, in press; Irwin, 1985), we predicted positive relationships between the OBE Feature Index and frequency of dream recall, lucid dreams, and claims of parapsychological experiences. If these variables predict the incidence of the experience, they may be related to the complexity of its content as well.

Similarly, we predicted positive relationships between the frequency of incidence of OBEs and dream recall and lucid dreams, and an index of parapsychological experiences to be described later. As stated before, the literature supports such associations (Alvarado, 1986, in press; Irwin, 1985).

### *Other Analyses*

Although Irwin (1985) did not find significant relationships when he explored OBE features in relation to sex and age, we believe this question should be explored further. In the previous study, using an index of OBE features, we did not find evidence of sex differences (Alvarado & Zingrone, in press). Irwin used specific features for comparison, while we are emphasizing the OBE Feature Index. Because it is possible that a more global comparison will yield significant results, we conducted other analyses that attempted to relate the OBE Feature Index to demographic variables, mainly sex and religiosity. In addition, we explored the frequency of each OBE feature in relation to the type of experience: that is, those who were single OBEers and those who were multiple OBEers. All these analyses were exploratory.

### *Summary of Hypotheses*

The hypotheses of this study may be summarized as follows. First, in relation to the index of OBE features, we predicted:—

- 1 A significantly higher OBE Feature Index for multiple experiencers than for those who reported a single OBE;

2 A significant positive correlation between OBE frequency and the OBE Feature Index;

3 A significant positive correlation between degree of claimed capacity to induce the OBE at will and the OBE Feature Index;

4 A significantly higher OBE index for those who claimed the capacity to have voluntary or induced OBEs than for those whose OBEs were occurring spontaneously;

5 A significant positive relationship between the OBE Feature Index and dream recall, lucid dreams and parapsychological experiences.

Other secondary hypotheses were:—

1 A significant positive relationship between degree of inducing the OBE at will and dream recall, lucid dream and parapsychological experiences;

2 Significant positive relationships between OBE incidence and dream recall, lucid dreams and an index of parapsychological experiences.

## METHOD

### *Participants*

The participants were readers of a Spanish popular psychic and New Age magazine published in Madrid called *Más Allá de la Ciencia*. The magazine has an international distribution, and its circulation is over 100,000 copies. Most of the readers of the magazine live in Spain, but the magazine circulates in other countries of Europe and in Latin America. Participants were self-selected on the basis of their interest in answering a questionnaire with an obvious emphasis on OBEs printed in the magazine.

Four hundred and ninety-two readers of the magazine returned completed questionnaires. Sixty-eight percent of these were women and 32% were men. Four hundred and eighty-seven participants provided information about their marital status. They reported themselves to be married (42.5%), single (41.7%), separated (7.6%), divorced (6.2%), widowed (1.8%), and living together (0.2%).

Out of 482 questionnaires with information on nationality, 94% were Spanish. Four percent were from Mexico and from Argentina, and the rest were from European countries or from mixed backgrounds (2%). The question about religion was answered by 398 individuals. The responses indicated that the largest group of participants were Catholic (48%). Others indicated that they were 'qualified' Catholics (3%), Christians (15%), had no religion (22%), or were of another religion (12%). In terms of religiosity ( $N = 459$ ), they rated themselves as not religious (24%), slightly religious (25%), moderately religious (39%), and very religious (12%).

### *Questionnaire*

We sent a questionnaire in Spanish to the editors of the magazine and this was published on two facing pages with some minor editorial changes (an English-language translation of the questionnaire appears in the Appendix). The questionnaire asked for the participant's name and address, demographic information (8 questions), and included nine other questions about dream recall, lucid dreams, precognitive dreams, waking ESP, apparitions, auras,

mystical experiences, movement of objects, and out-of-body experiences, in that order. The aura and the OBE question asked for a description of the experience. The OBE question had seven sections in which details about the features of the experience were requested. The final question asked whether the participant was willing to participate in future research.

The dream recall question had six options ranging from never to always (every day). The rest of the experience items had three options for reply: (a) Yes, once; (b) Yes, more than once (approximately how many?); and (c) No. Reply options were limited to conserve space in the magazine. The option that allowed the participants to estimate the frequency of the experience provided a more specific estimation for frequency analyses.

The OBE question (translated to English from Spanish) read: "Have you had an experience in which you felt you were outside of or separated from your physical body, with the mental sensation of being in a different place from that of your physical body?" The participants were also asked about the frequency of the experience, the ability to have it at will and about such OBE features as: awareness of sensations of getting out of the body, feeling one was located in a body or without a body, feeling vibrations and floating sensations, hearing voices, and seeing the following: tunnels, lights, memory images, the physical body, other dimensions, and a cord-like connection to the physical body (see Appendix).

The heading of the questionnaires was provided by the editors of the magazine. It read: "Study of Psychic Experiences in Spain: Do You have Paranormal Powers or Have You Had Strange Phenomena?" The instructions of the questionnaire presented the study as one of parapsychological phenomena similar to those conducted in other countries. The collaboration of readers was solicited and anonymity was guaranteed. The readers were asked to send the questionnaires to the editorial offices of the magazine. One of us (CSA) was mentioned in the beginning of the questionnaire as the person conducting the research project at the University of Edinburgh.

### *Procedure*

The questionnaire went out in a regular issue of the magazine in the Fall of 1994 and was distributed through the magazine's normal circulation procedure, that is, via news-stands and subscriptions. Respondents completed the questionnaires and mailed the pages or copies of them to the magazine's editorial offices. The editors collected the replies and mailed them to CSA in two groups. The first 453 arrived in the Spring of 1995 and the final 39 arrived in the Fall of 1995. Because the editorial offices collected the replies and forwarded them through a third party, no specific response-time data were available.

An index of OBE features (the OBE Feature Index) was generated using the 15 questions about features that could be coded as present or absent. Each present feature was counted as one (1) and the sum of all present features formed the OBE Feature Index per person. The features were the following: awareness of sensations of going OB, seeing a tunnel, seeing lights, feeling vibrations, hearing music, feeling a cracking sensation in the head, seeing a cord or ray of light connecting the OB location to the physical body, seeing

images of the person's life, hearing voices, seeing spiritual entities, perceiving veridical events (that is, events the person thought were happening in reality), sensations of floating, sensations of movement, seeing the physical body, and awareness of sensations of returning to the physical body.

We also created an index of parapsychological experiences, the Parapsychological Index. This index was done in the same manner as the OBE Feature Index but with the following experiences: waking ESP, precognitive dreams, apparitions, auras, movement of objects, and mystical experiences. These questions are reproduced in the Appendix.

### *Analyses*

The data was entered into the StatPac Gold statistical software program, version 4.5. Most of the analyses were conducted using the Mann-Whitney U Test (OBE Feature Index), and with chi-square tests (frequency analyses). We also used Spearman Rank Order Correlations and standard multiple regressions. Effect sizes for the Mann-Whitney U  $z$ -values were generated using the following formula to obtain an  $r$ -value:  $z/\sqrt{N}$  (Rosenthal, 1991, p.19), while for the chi-square analyses we used the phi coefficient. All predicted analyses were one-tailed. No formal correction for the number of analyses was done. Instead, we hope that future replications of our findings will decide the validity of our results.

## RESULTS

### *OBE Incidence*

Out of 486 questionnaires with information about OBE incidence, 400 or 82% claimed to have had OBEs. There was no significant difference between the proportion of OBEs reported by men ( $N = 158$ , 83%) and women ( $N = 328$ , 82%),  $\chi^2(1, N = 486) = 0.01$ ,  $p = 0.91$ ,  $\phi = 0.01$ .

Out of those 400 who claimed the experience, 35% had had it once, while 65% had had it more than once. Table 1 shows the frequency distribution of the number of OBEs claimed by a subset of the experiencers who estimated an

Table 1

*Frequency of the Out-of-Body Experience (N = 278)*

OBE Frequency	Percent	OBE Frequency	Percent
1	50	15	1
2	19	17	0.4
3	11	20	1
4	4	30	1
5	4	35	0.4
6	3	40	0.4
7	0.4	50	0.4
8	0.4	100	1
10	3	1000	1
12	0.4		

Table 2

*Features of Out-of-Body Experience*

Feature	N	Percent
Sensation of going out	375	
Yes		42
No, found myself outside		40
No, do not remember		18
Saw tunnel	372	
Yes, going out		11
Yes, returning		3
Yes, both leaving and returning		0.3
Yes, other moments		9
Self-perception	331	
Another body		39
No body		23
Clouds, fog, balls		10
Other		22
No recollection		6
Saw lights	395	30
Felt vibrations	395	23
Heard music	396	15
Felt/heard cracking in head	395	9
Cord or ray of light between self and physical body	396	11
Saw images about events or actions in life	396	12
Heard voices	396	28
Saw spiritual entities	396	29
Perceived veridical events	395	15
Floating sensations	396	75
Sensations of movement	396	51
Saw physical body	396	45
Surroundings	302	
Similar to usual		49
Like a different dimension		34
Other		17
Sensation of return	382	
Yes		43
No, suddenly back		40
No, do not remember		17

approximate number of OBEs ( $N = 278$ ). Fifty percent of the experiencers of this subset had had only one OBE. In fact, 95% of them fell below the distribution median of 12%. Evidently this subset included fewer multiple experiencers than the previous analysis.

There were 391 replies to the question about having OBEs at will. Most of the respondents said 'no' to this question (63%). Others said 'yes' to different degrees: rarely (14%), sometimes (14%), almost always (5%), and always (4%). This question had a five-point scale. The mean obtained was 1.73 ( $N = 391$ ; range: 1–5;  $SD = 1.13$ ). Sixty-one percent of those claiming some level of wilful OBEs had multiple experiences, while 39% had experienced only one.

### *OBE Features*

Table 2 shows the frequency of the OBE features in the sample. The most frequently endorsed feature was floating sensations (75%). This was followed by sensations of movement (51%), surroundings similar to usual ones (49%), seeing the physical body (45%), and sensations of return (43%) and of leaving the body (42%).

A factor analysis with Varimax simple structure-factor loadings was performed with 15 'yes' and 'no' OBE features ( $N = 343$ ) mentioned above in relation to the OBE Feature Index. A single factor emerged, accounting for 19% of the variance. The same solution was obtained when two factors were forced.

To explore whether the features of the OBE varied as a function of having the experiencer enter surroundings different from the usual one (e.g., different 'dimensions' or places) or stay in their usual surroundings we contrasted the features in the questionnaire that related to surroundings. As seen in Table 3 the analyses that achieved significance favored the different surroundings condition. These were passing through a tunnel, seeing lights, seeing images of one's life, seeing spiritual entities, hearing voices, and having veridical perceptions.

### *Descriptive Information of the OBE Feature Index and the Parapsychological Index*

The mean OBE Feature Index, or the average of replies to 15 OBE feature questions, was 4.38 ( $N = 400$ ; range: 0–14;  $SD = 2.73$ ). There were no significant differences between the OBE Feature indices of male ( $N = 159$ , Mean = 3.67, Mean Rank = 252.94) and female participants ( $N = 333$ , Mean = 3.53, Mean Rank = 243.90), as assessed with the Mann-Whitney U test ( $z = 0.59$ ,  $p = 0.56$ ,  $r = 0.03$ ). The correlation between the index and level of religiosity (measured on a four-point scale) was not significant ( $r_s[457] = 0.05$ ,  $p = 0.31$ ).

The mean Parapsychological Index, formed of the average of the replies to five 'yes' and 'no' questions about Parapsychological experiences, was 3.83 ( $N = 492$ , range 0–6,  $SD = 1.46$ ). There were no significant differences in the index measures of male ( $N = 159$ , Mean = 3.68, Mean Rank = 233.57) as compared with female participants ( $N = 333$ , Mean = 3.90, Mean Rank = 252.67), as assessed with the Mann-Whitney U test ( $z = 1.39$ ,  $p = 0.16$ ,  $r = 0.06$ ). However, a correlational analysis between the Parapsychological Index and religiosity was significant ( $r_s[457] = 0.15$ ,  $p = 0.001$ ).



Table 3

*OBE Features in Relation to Surroundings During the Experience*

Feature	Surroundings				$\chi^2(1)$	p(2t)	phi
	Different	N	Similar	N			
Sensation of going out	43%	99	40%	139	0.22	0.64	0.03
Saw tunnel	33%	92	8%	143	22.43	0.0000	0.31
Saw lights	43%	103	19%	146	17.39	0.0000	0.26
Felt vibrations	27%	103	20%	146	1.83	0.18	0.09
Heard music	18%	103	10%	146	3.35	0.07	0.12
Felt/heard cracking in head	7%	103	9%	145	0.38	0.54	0.04
Cord or ray of light between self and physical body	14%	103	9%	146	1.37	0.24	0.07
Saw images about events or actions in life	16%	103	6%	146	7.01	0.01	0.17
Heard voices	31%	103	19%	146	5.28	0.02	0.15
Saw spiritual entities	45%	103	15%	146	26.64	0.0000	0.33
Perceived veridical events	18%	103	9%	145	3.99	0.05	0.13
Floating sensations	77%	103	77%	146	0.02	0.90	0.01
Sensations of movement	52%	103	51%	146	0.0002	0.99	0.001
Saw physical body	43%	103	51%	146	1.81	0.18	0.09
Sensation of return	37%	99	44%	144	0.93	0.33	0.06

*OBE Feature Index, Frequency and Wilfulness of OBEs*

As seen in Table 4, the OBE Feature Index correlated significantly and positively with OBE frequency, OBEs at will, lucid dreams, dream recall, and with the Parapsychological Index.

The relationship of the OBE Feature Index to the number of OBEs and to wilful OBEs was also examined. The indices of wilfully-induced versus non-wilfully-induced OBEs were compared as were the indices of individuals with single versus multiple OBEs, using the Mann-Whitney U test. Single-OBE-experients (N= 139, Mean = 3.43, Mean Rank = 161.44) obtained a lower feature index than did multiple experients (N = 261, Mean = 4.85, Mean Rank = 221.30). This difference was significant ( $z = 4.93$ ,  $p = 0.0000004$ , 1t,  $r = 0.25$ ). Experients who claimed to have had OBEs at will (N = 144, Mean = 5.42, Mean Rank = 232.39) obtained a higher index than those experients who could not have OBEs at will (N = 247, Mean = 3.82, Mean Rank = 174.79). This difference was also significant ( $z = 4.86$ ,  $p = 0.000001$ , 1t,  $r = 0.25$ ). In a

comparison of extremes, those who said they could always have OBEs at will ( $N = 16$ , Mean = 8.38, Mean Rank = 224.91) obtained a higher OBE Index than those who said that they could never have OBEs at will ( $N = 247$ , Mean = 3.82, Mean Rank = 125.98). Again, the difference was significant ( $z = 5.04$ ,  $p = 0.000001$ ,  $r = 0.31$ ).

Table 4

*OBE Feature Index in Relation to OBE Frequency, OBE at Will, Dreams, and Parapsychological Experiences*

Variable	N	$r_s$	$p(1t)$
OBE Frequency	364	0.70	0.00000
OBEs at Will*	391	0.38	0.00000
Lucid Dreams	254	0.21	0.01
Dream Recall	482	0.12	0.01
Psi Index	492	0.36	0.00000

\*To control for the effect of OBE frequency the same analysis was performed using only single experients. The magnitude of the results was similar to that of the first analysis,  $r_s(133) = 0.34$ ,  $p = 0.0001$ .

Because most of those who had wilful OBEs were also multiple experients, we conducted an analysis to control for this possible confound. In this analysis we used only those participants with single OBE frequency. Those who had wilful OBEs ( $N = 20$ , Mean Rank = 70.40, Mean = 3.60) were not significantly higher on the OBE Feature Index than those who did not have wilful experiences ( $N = 113$ , Mean Rank = 66.40, Mean = 3.48),  $z = 0.43$ ,  $p = 0.67$  (2t),  $r = 0.04$ . The difference in magnitude in the uncorrected and corrected analyses (with effect sizes of 0.25 and 0.04) suggests that OBE frequency may be responsible for the significant relationship. However, when the same analysis was done for the correlation between wilfulness and the feature index (see Table 4) the magnitude of the results diminished only by 0.04.

Table 5

*Standard Multiple Regression of Dreams and Psi Index as Predictors of the OBE Index*

Variables	Coefficient	Beta	p	sr <sup>2</sup> unique
Dream Recall	-0.0112	-0.0048	0.94	
Lucid Dreams	0.0079	0.1879	0.002	0.03
Psi Index	0.6244	0.3396	0.0000	0.11

Intercept = 0.8921

$R^2 = 0.16$ , Adjusted  $R^2 = 0.15$ ,  $R = 0.40$ ,  $F(3, 245) = 15.95$ ,  $p < 0.00001$

One can surmise from Table 4 that the Parapsychological Index is a better predictor of the OBE Feature Index than dream recall or lucid dreams. This

was confirmed by a standard multiple regression in which the OBE Feature Index was the dependent variable and dream recall, lucid dreams, and the Parapsychological Index were the independent variables (Table 5). As seen in Table 5, the regression was significant, predicting 15% of the variance. The Parapsychological Index accounted for more unique variance than did the dream variables.

To assess the individual contributions as predictors of the OBE Feature Index of the specific parapsychological experiences of which the Parapsychological Index was composed, another standard multiple regression was conducted with the OBE Feature Index as the dependent variable and the following as independent variables: waking ESP, precognitive dreams, apparitions, auras, movement of objects, and mystical experiences. As can be seen in Table 6 the regression was significant, predicting 17% of the variance. Only waking ESP and aura experiences were independently significant predictors of the OBE Feature Index.

Table 6

*Standard Multiple Regression of Parapsychological Experiences as Predictors of the OBE Index*

Variables	Coefficient	Beta	p	sr <sup>2</sup> unique
Precognitive Dreams	0.0242	0.0796	0.54	
Waking ESP	0.1446	0.5558	0.05	0.02
Apparitions	0.0111	0.2071	0.10	
Auras	-0.1098	-0.5944	0.01	0.04
Mystical Experiences	-0.0052	-0.1379	0.45	
Movement of objects	0.0900	0.3126	0.08	

Intercept = 2.39

$R^2 = 0.20$ , Adjusted  $R^2 = 0.17$ ,  $R = 0.45$ ,  $F(6, 157) = 6.56$ ,  $p < 0.00001$

### *Other Analyses of OBE Features*

A comparison of the frequency of specific OBE features in relation to single and multiple (more than one) OBEs showed that multiple experiences were associated with higher proportions of features in 14 of the 15 comparisons (see Table 7). However, only eight of these comparisons were significant. The features in question were seeing lights, veridical perceptions, sensations of movement, vibrations, seeing spiritual entities, hearing voices and music (1 each), and feeling or hearing cracking sensations in the head.

### *OBEs, Dreams, and Parapsychological Experiences*

The frequency of dream recall was measured by a 6-point scale. The results of 482 respondents were as follows: Always (21%), frequently (44%), occasionally (17%), sometimes (13%), rarely (6%), and never (0%). The answers to the dream recall question obtained a mean of 4.61 ( $N = 482$ , range: 2–6,  $SD = 1.12$ ).

Table 7

*Comparison of OBE Features in Single and Multiple Experiencers*

Feature	Single %	N	Multiple %	N	$\chi^2(1)$	<i>p</i>	phi
Sensation going out	39	131	44	241	0.57	0.45	0.04
Saw tunnel	21	127	24	242	0.14	0.71	0.02
Saw lights	22	132	34	260	5.90	0.02	0.12
Felt vibrations	16	132	27	260	5.59	0.02	0.12
Heard music	8	133	19	260	7.16	0.01	0.14
Felt/heard cracking in head	4	133	11	259	6.14	0.01	0.13
Cord or ray of light between self and physical body	8	133	14	260	3.06	0.08	0.09
Saw images about events or actions in life	11	133	14	260	0.69	0.40	0.04
Heard voices	17	133	33	260	10.94	0.001	0.17
Saw spiritual entities	19	133	35	260	10.64	0.001	0.16
Perceived veridical events	4	133	21	259	20.70	<0.001	0.23
Floating sensations	71	133	77	260	1.42	0.23	0.06
Sensations of movement	38	133	58	260	13.18	0.0003	0.18
Saw physical body	46	133	44	260	0.15	0.70	0.02
Sensation of return	38	129	46	250	1.71	0.19	0.07

Mean dream recall of persons who claimed OBEs ( $N = 396$ , Mean = 4.59, Mean Rank = 236.17) was not significantly different from that of the participants who did not claim OBEs ( $N = 80$ , Mean = 4.72, Mean Rank = 250.04,  $z = 0.82$ ,  $p = 0.21$ , 1t,  $r = 0.04$ ). Comparisons of the incidence of OBEs to lucid dreams and parapsychological experiences obtained positive relationships, as seen in Table 8.

Table 8

*Incidence of Lucid Dreams and Parapsychological Experiences in Relation to OBEs*

Variable	OBEs %	N	No OBEs %	N	$\chi^2(1)$	p	phi
Waking ESP	75	393	63	86	5.01	0.03	0.10
Precognitive Dreams	79	398	72	85	1.52	0.22	0.06
Apparitions	85	396	76	86	3.70	0.05	0.09
Auras	49	395	34	85	5.34	0.02	0.11
Movement of Objects	38	395	29	85	1.75	0.19	0.06
Mystical Experiences	74	397	55	85	10.67	0.001	0.15
Lucid Dreams	91	396	81	86	6.13	0.01	0.11

To explore the value of the dream and parapsychological experiences as predictors of OBE group membership, that is, to test which variables predicted those who said 'yes' to the OBE question and those who did not, we performed a probit regression analysis. As can be seen in Table 9, the regression was significant. In this analysis the dream experiences were better predictors of OBE group than the individual parapsychological experiences (not the Parapsychological Index).

Table 9

*Probit Regression of Dream and Parapsychological Experiences as Predictors of OBE Group Membership*

Variables	Coefficient	Standard Error	T-Ratio	p
Dream Recall	-0.276	0.125	-2.21	0.03
Lucid Dreams	0.157	0.058	2.72	0.01
Precognitive Dreams	-0.003	0.039	-0.086	0.93
Waking ESP	0.013	0.061	0.216	0.83
Apparitions	0.029	0.058	0.501	0.62
Auras	-0.112	0.114	-0.986	0.32
Mystical Experiences	0.355	0.264	1.34	0.18
Movement of Objects	0.247	0.212	1.16	0.24

$$\chi^2(8) = 24.99, p = 0.002, \text{ Log of Likelihood Function} = -54.34$$

## DISCUSSION

It is clear that the sample used in this study cannot be considered representative of the general population, because all the participants were readers of a magazine devoted to parapsychological topics and to other claims of the paranormal. It is precisely these characteristics which explain the high incidence of OBEs in this study (82%). Many of the readers follow the magazine because they have had parapsychological experiences and, as a consequence, have a high degree of interest in the topic. In other words, we believe we have tapped into a self-selected group of extremely high incidence of OBEs and parapsychological experiences in general. The incidence of OBEs and parapsychological experiences is higher in this study than in other studies with non-representative samples that used similar questions, such as those conducted in Brazil (Zangari & Machado, 1996), India (Usha & Pasricha, 1989), and the United States (Kohr, 1980). In addition, and as mentioned before, the structure of the questionnaire made it clear that our main interest was the OBE. That is, although the OBE question appeared at the end of the questionnaire, no other question had so many sub-questions as this one. This emphasis on the OBE probably inflated OBE incidence because clear demand characteristics existed in the questionnaire, indicating to the participants that the OBE was the main interest of the researchers. Those who had OBEs were likely to be more motivated to answer the questionnaire than those who did not have the experience.

The high incidence of OBEs in this study (82%) is lower only than the results of studies with members of the Isneg tribe of a remote rural community in the Philippines (95%—Murray, 1983), and with high fantasy-prone individuals in the United States (88%—Wilson & Barber, 1983). Even special groups designed for persons with special interests in parapsychological phenomena have had lower incidences. For example, this was so in the case of the members of the Churches' Fellowship for Psychical and Spiritual Studies in England (51%—Banks, 1962) and in members of the Association for Research and Enlightenment in the United States (50%—Kohr, 1980; 59%—Richards, 1988; 66%—Richards, 1991—this study divided the incidence of OBEs into induced and spontaneous experiences; the percentage reported here is the one for spontaneous OBEs).

Another way to assess the results of the present study is by comparing the incidence of OBE frequency and of particular OBE features with that of other studies. Similar to other studies (reviewed by Alvarado, 1986) the present one found that multiple OBE claims were more frequent than single OBE claims. In this sense the present study was comparable to previous findings.

The frequency of some OBE features does not seem to be atypical, seen in the light of previous studies. Because OBE incidence was so high, one might have expected similarly high incidence of specific OBE features, thus indicating that the sample was indeed very different from the samples in other studies in terms of the content of the experience. In a previous review paper one of us (Alvarado, 1986) summarized the proportion of OBE features of previous studies by calculating their mean percentage across studies which asked similar questions. Nine of these analyses were comparable with those

of the present study. These are, with the present study preceding the mean percentage of the previous studies' features, and this followed by the number of studies averaged: sensation of going out (42%/31%,  $N = 4$ ), self-perception as another body (39%/46%,  $N = 10$ ), self-perception as no body (23%/31%,  $N = 6$ ), self-perception as clouds, fog, ball of light (10%/29%,  $N = 6$ ), cord connection (11%/6%,  $N = 6$ ), saw spiritual entities (29%/25%,  $N = 5$ ), perceived veridical events (15%/19%,  $N = 10$ ), saw physical body (45%/62%,  $N = 11$ ), and sensations of return (43%/56%,  $N = 3$ ). The comparison of these few features indicates that the present study was higher than the averaged studies in three of the nine comparisons. The differences in the three comparisons do not seem unreasonable, considering the ranges of incidence overall.

To conduct other comparisons it is necessary to focus on specific studies. In the present study 15% of the sample claimed to have heard music, as compared with 8% of the previous study (Alvarado & Zingrone, in press) and 4% of Twemlow et al.'s (1982, recalculated to reflect percentage of individuals with OBEs) study. Twenty-three percent felt vibrations in the body, as opposed to 12% of Blackmore's (1984a) sample in instances just before the OBE. Images of one's life were reported in about the same proportion in the present (12%) and in the previous study (15%) (Alvarado & Zingrone, in press). The places in which the person found herself to be once 'out' were described as similar to the usual one in 49% of the cases, and like a different dimension in 34%. In Poynton's (1975) study 'usual surroundings' were also more frequent than 'different surroundings' (82% and 4%), but the proportion of cases of different environments was much lower than that of the present study. Blackmore (1984a) reported that 12% of her sample claimed to enter another world. Finally, the incidence of tunnels encountered on going out of the body and on returning was 11% and 3%. In the previous study, such experiences obtained percentages of 23% and 11%, respectively.

Regardless of how representative the OBE features are it is interesting to note some of the most frequent reports. Floating sensations (75%) were very common, as were such features as sensations of movement (51%), seeing the physical body (45%), and sensations of leaving (42%) and returning to the body (43%). On the other hand, several other features were not as common and obtained lower percentages. These included hearing music (15%), hearing or feeling cracking sensations in the head (9%), seeing a connecting cord (11%), and seeing images of past events in the lives of the experiencers (12%).

In analyses testing the hypotheses about the OBE Feature Index, most were confirmed. There were significant and positive relationships between the Feature Index and OBE frequency, a measure of OBE at will, the index of parapsychological experiences, and the frequency of lucid dreams and dream recall. In other words, the higher the OBE Feature Index, the higher the claims of the other experiences. Although these findings confirm the predictions, it is not immediately clear why this should be so. It is possible that participants who showed a tendency to endorse a large number of experiences did so because of an acquiescent response set and not because they believed they had actually had the experiences. There is no way to support or disconfirm this possible interpretation in this sample. However, the features of the OBE as reported in the present study are not, in general, so different (with some

exceptions) from those obtained in other studies. This consistency may be interpreted as an element in favor of accurate measurement unless one is willing to argue that the other studies' results can also be explained in terms of response biases. Future studies should include measures of social desirability, or use reversed scales or control questions to deal with the possible artifact of an acquiescence response set.

On the other hand, the results seem consistent with Blackmore's (1982, 1984b) theoretical model of the OBE which assumes that practice in the changing of cognitive maps should affect the content of the OBE. That is, the more practice an individual has, the more diverse and complex the experience can be. Nonetheless, there may be alternative interpretations. A higher number of features may not reflect more complex cognitive creations, but more attention to the details of the experience in the sense that the experienced OBEr has developed better introspective abilities.

Similarly, it makes sense to find that the OBE Feature Index also correlated with claims of parapsychological experiences and with lucid dreams and frequency of dream recall. If these phenomena are also related to such cognitive processes as attentional processes or a facility for alteration of consciousness, a common mechanism may underlie all of these. Similarly, it makes sense to find that OBE incidence (as opposed to its features) is also related to frequency of dreams and parapsychological experiences, a finding that replicates what others have reported (Alvarado et al., 1996; Kohr, 1980; Palmer, 1979).

Although the factor analysis of the OBE features produced a single factor, the chi-square analyses of OBE features in relation to the surroundings the individuals 'entered' (see Table 3) suggests that Irwin's (1985, pp. 7, 102-104) classification of OBEs as 'naturalistic' (the usual or normal environments) and 'supernaturalistic' (different dimensions or environments) has some empirical basis (see also Sabom's [1982] classification of NDEs). In our analyses we found that those individuals who said they entered different environments had a higher frequency of features that may be considered to be supernaturalistic. This refers to tunnels ( $\phi = 0.31$ ), lights ( $\phi = 0.26$ ), images of one's life ( $\phi = 0.17$ ), voices ( $\phi = 0.15$ ), and spiritual entities ( $\phi = 0.33$ ). Further exploration of this issue is needed using multivariate statistical techniques.

Overall, this sample presented some differences from other studies in terms of OBE incidence and in the incidence of a few of the OBE features. Nonetheless, in general the frequency of the features and the findings related to dream and parapsychological experiences were similar to those of previous studies. Research such as ours is important for a better understanding of the features of the OBE, an effort that may eventually allow us to empirically develop a typology of OBEs or to differentiate the OBE from, or associate it with, other human experiences.

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## APPENDIX

This questionnaire was originally in Spanish. It has been translated into English by the first author.

Name:

Address:

City:

Province:

Postal Code:

1. Sex:
  - a. Male
  - b. Female
2. Place of birth:
3. Nationality:
4. Occupation or Profession:
5. Education (indicate your studies or academic degrees. If you do not have academic studies indicate so):
6. Marital status:
  - a. Married
  - b. Single
  - c. Divorced
  - d. Separated
7. Indicate what religion you practice:
8. How religious do you consider yourself to be?
  - a. Not religious
  - b. Slightly religious
  - c. Moderately religious
  - d. Very religious
9. How frequently do you remember your dreams?
  - a. Never
  - b. Rarely (once or less a month)
  - c. Sometimes (2 or 3 times a month)
  - d. Occasionally (1 or 2 times a week)
  - e. Frequently (3 or 4 times a week)
  - f. Always (every day)
10. Have you ever had a dream during which you knew that you were dreaming?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:    )
  - c. No
11. Have you had a dream that corresponded in details to an event that happened afterwards and about which you did not know or did not expect to occur when you had the dream?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:    )
  - c. No

12. Have you ever had, while awake, a sensation, impression, or vision that an unexpected event had occurred, was happening, or was going to happen, and you later learned that the event had occurred some place?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. No
13. Have you ever had, while awake and when you were not under the influence of disease, drugs, or alcohol, the impression of seeing, hearing, or being touched by someone; something that could not be explained by physical causes or other explanations?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. No
14. Have you ever seen a light, lights, a glimmer, or an 'energy field' around a persona or parts of its body that could not be explained by physical causes or other explanations?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. NoIf your reply is 'yes', please describe your experience briefly (use separate paper if necessary)
15. Have you ever had an experience in which you felt in direct contact or as if you were part of God, nature, or your surroundings?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. No
16. Have you ever had the experience of seeing a physical object move by itself which could not be explained through physical causes or through other rational explanations?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. No
17. Have you ever had an experience in which you felt outside of or separated from your physical body, with the subjective sensation of being at a different place from that of your physical body?
  - a. Yes, once
  - b. Yes, more than once (estimate how many:   )
  - c. NoIf your answer is 'yes', please describe your only experience or your most frequent experience (use additional paper if necessary):

WHAT FOLLOWS REFERS TO THE EXPERIENCE OF QUESTION 17

If you have had the experience of feeling outside of your body, please reply to the following:-

- A. Can you have this experience at will?
1. No
  2. Yes, rarely
  3. Yes, sometimes
  4. Yes, almost always
  5. Yes, always

If you have had more than one experience answer the following questions in relation to your most frequent experience. If you have had only one experience answer the questionnaire in terms of this experience.

- B. Did you have a sensation of leaving the body at the beginning of the experience?
1. Yes, I felt I was leaving the physical body
  2. No, I found myself suddenly out of the physical body
  3. I do not remember precisely
- C. Did you see a tunnel during your experience?
1. Yes, when I was leaving my physical body
  2. Yes, when I was returning to my physical body
  3. Yes, during moments other than those mentioned in 1 and 2
  4. No
- D. In what form did you see yourself during the experience?
1. In a body similar to mine
  2. Without any body
  3. In forms such as clouds, fog, balls of light, or a point in space
  4. Do not remember
  5. Other (describe):
- E. Did you perceive during the experience some of the following phenomena? (You may select more than one)
1. Lights
  2. Vibrations
  3. Music
  4. Crackings in the head
  5. Cord of ray of light between you and your physical body
  6. Images about events or actions of your life before having the experience
  7. Voices
  8. Spiritual entities
  9. Veridical events happening at a place distant from that of the experience
  10. Floating sensation
  11. Sensation of movement
  12. Seeing the physical body
- F. How would you describe your surroundings during your experience?
1. Similar to the usual surroundings
  2. A dimension different from the usual world (describe):
  3. Other (describe):
- G. Did you have the sensation of returning to the body at the end of the experience?
1. Yes, I felt I was entering into my physical body
  2. No, I found myself suddenly inside my physical body
  3. Do not remember

Are you interested in answering additional questions? If your answer is yes we will send you other questionnaires to your postal address.

1. Yes
2. No

(Please do not phone the editorial offices; the work regarding this questionnaire is being conducted at the University of Edinburgh and it will be impossible to answer you. Please send any reply or commentary to us in writing.) Thank you again for your participation.