

PARANORMAL EXPERIENCE RELATED TO IMPROVING ACADEMIC MOTIVATION OF SLOVAK UNIVERSITY STUDENTS

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ABSTRACT

Currently, at the beginning of the 21st century's third decade, scientific attention must be focused on modern topics. These challenges include also the paranormal experience of university students. However, many of university executives either downplay it or even reject it. With this behavior, they fail to reveal the important potentials that are contained in the intra-motivational system of each student. In this way, they lose the opportunity to properly target the university's motivational efforts and programs aimed at strengthening academic motivation. The aim of paper is to fulfill this gap. It analyzes, compares and synthesizes theoretical views in the field, and completes them in terms of positive and negative impacts on intrapsychic balance and motivation of the student. In an effort to increase the scientific relevance of paper, two hypotheses are set. H1: There exist relevant relations among searched paranormal phenomena, H2: Occurrence of paranormal phenomena depends on the gender. The empirical part presents the results of a unique survey participated by Slovak HE students. With the use of frequency analysis, χ^2 test and Product-Moment Correlation, the most important findings include that among paranormal events, students experience the most especially déjà vu, presentiment, and 6th sense belief. The most frequently un-experienced events are: out of body experience, telepathy, and signs of ghosts. Almost half of the phenomena show significant relationships. Also, the statistical significance of gender dependence was approved for 4 of 8 searched phenomena: déjà vu, telepathy, 6th sense belief, and signs of ghosts. Confirming both hypotheses, it can be deduced that consider for anomalousness could be a great inspiration for academic motivation increase. Several ways for improvement of motivation are suggested, and recommendations for the university management with regard to master the negative impacts of these phenomena are formulated in the conclusion.

Keywords: *Paranormal experience, higher education, motivation, students, survey*

INTRODUCTION

The Intra-motivational system of higher education student contains various drives and phenomena that call up, orientate and sustain an academic effort. In this view, academic motivation is the complicated system of internal motivational events and dynamics focused on planning, balancing and achieving the pre-determined life, academic and career ambition. Currently, many various forces and elements affect academic motivation. One of the non-traditional, but inspirational from the viewpoint of scientific research, is the anomalous, i.e. paranormal experience.

The psychology of the paranormal has always reflected wider themes about nature [1]. Anomalistic psychologists attempt to understand their subject of matter by considering the phenomena to be explained from the varying perspectives of all of the traditional sub-disciplines of psychology [2]. Thus, parapsychology is concerned with states of consciousness that have traditionally been considered supernatural or paranormal [3], and as a permanently discussed discipline, deals with paranormal experiences. It attracts the attention and fascinates people, it searches “extrasensory perception (ESP) and other phenomena which cannot be explained by existing scientific principles” [4]. On the other hand, “it is possible that a scientific explanation might one day be found for these claims” [5]. This paper tries to contribute partially in such an effort.

Although the paranormal experience is “difficult to operationalize, there has been a scholarly consensus that it is a multidimensional construct” [6]. The paper uses the terms paranormal experience rather than paranormal belief. “Having a belief in the paranormal does not necessarily mean having experienced the paranormal” [7]. In other words, an experience that might be described as paranormal or anomalous is one that is in some way ‘out-of-the-ordinary’ [8].

In the paper, the paranormal experience can be defined as the conviction in the peculiar, non-standard or unusual psycho-physiological experiences of individuals. Such unusual ‘events’ are often the culmination and transformed ‘message/link’ of their subconscious and/or the result of their unique cerebral synopsis. It is important to emphasize that the subject itself, i.e. student is sure that s/he experienced the unusual, and the daily reality distant event. The essence is the intra-personal certainty of the student that s/he experienced such unexplained situation.

Although the topic of paranormal experience should be considered absolutely natural at the beginning of the third decade of the 21st century, many theorists, but especially university executives, either downplay it or even openly reject it. The paradox is that many of them often rely on their intuition in their management decisions. At the same time, intuition is often identified with one of the most frequently experienced abnormal experiences, i.e. with the sixth sense. Intuition/sixth sense is usually a reflection of feeling for the situation and the

ability to connect many rational elements or fragments of experience into absolutely new, often unexpected solutions. In other words, these unique experiences in modern higher education deserve their deeper scientific attention.

Based on the aforementioned, the paper's research goal is defined in this way: Theoretically and empirically search the higher education students' anomalous experience. These characteristics will be examined from the viewpoint of their matter-of-fact, but also, from the perspective of both positive and negative relations to academic motivation. With an intention to overcome an existing knowledge-relation gap in this area, an empirical part will present the results of a questionnaire survey, attended by $n = 443$ university students in the Slovak Republic, Europe. The survey was focused on investigating the existence of paranormal experiences and disclosing potential dependencies and relations between them. With respect to basic scientific principles, the empirical effort will consist in testing relations among paranormal experiences (H1), potential gender dependencies with regard to paranormal experiences (H2). The conclusive parts will discuss and generalize the obtained results, and recommend some of the prior suggestions in the field.

PARANORMAL EXPERIENCE AND EXTRASENSORY PERCEPTION

Although Swets pointed out in 1990 that Commission for Searching Extrasensory Perception did not find any scientific evidence for the existence of the ESP in researches performed over the past 130 years [9], paradoxically, psychological scientists not only reject certain claims but also construct both their opponents as unscientific and, in the process, themselves as scientific [1].

With the use of primary psychology classification, it is possible to experience unusual events through the five basic senses (sight, hearing, touch, smell, taste) or without these ones (e.g. [2,5]). Based on this, the chosen anomalous categories could be structured into two groups: a) paranormal experiences, b) extrasensory perception. Déjà vu, sleep paralysis, out-of-body experience and signs of a ghost could be ranked into the first group. Further searched phenomena, i.e. presentiment, telepathy, clairvoyance, 6th sense belief, could be ranked into the second group.

Paranormal Experience

Accepting presented ideas, the characteristic point of this paper's survey is focused on paranormal experience (with 6th-sense belief). Of course, an answer (yes/no) in the survey means "I remember (or not remember) that I have experienced." There is a possibility that many students have forgotten their experiences although it is difficult to confirm it. Thus, the answer (yes/no) can be also considered as a kind of expression of occurrence.

First of anomalous experiences, searched in the paper, i.e. déjà vu, can be described as an individual's sureness that s/he has already found him/herself in the same situation, either as a direct participant or at least as a witness, and s/he perceived the situation extremely intensely. Based on knowledge of neurology, functions of the brain, disclosing various cerebral connections, etc., Brown considers déjà vu as a specific cognitive illusion which may result from: "(a) a brief change in normal neural transmission speed causing a slightly longer separation between identical messages received from two separate pathways, (b) a brief split in a continuous perceptual experience that is caused by distractions and gives the impression of two separate perceptual events, and (c) the activation of implicit familiarity for some portion of the present experience without an accompanying conscious recollection of the prior encounter" [10].

Sleep paralysis represents one of the most unfavourable anomalous events. It can be characterized as a disabling of movement, as a temporary palsy, numbness of limbs or whole body during sleep and loss of control over one's physiological reactions. It is often associated with great psychological and physiological discomfort. „People felt paralyzed, could not speak, felt helpless, and were overwhelmed by extreme fear“ [11]. It is often described as a terror in the night (e.g. [12]). Worse sleep quality was found in multiple studies to be associated with increased odds of sleep paralysis occurrence [13]. Sleep insufficiency can have a negative impact on the physical and mental health of university students and be detrimental to cognitive skills for learning [14].

Third of searched anomalous is a sign of a ghost. The ghost may have a quasi-imaginary-optical form, and may soon be lost. However, the 'existence' of ghosts is often documented in graphical form – as repeatedly appearing inscriptions on the walls and the like. Ghosts consist of a pattern of information residing in a low energy, high energy, negative energy (or whatever) conformation [15]. Similarly, as sleep paralysis, the fear of ghosts may be a cause of intense discomfort, poor sleep, and socio-occupational impairment [16] while hard or intensive types demand thorough clinical attention and psychiatric help. On the other hand, the belief in ghosts functions sometimes as a catalyst for spiritual transformation [17], or gifts individuals a warning [18] pointed out that these ones are a reflection of conventional wisdom alteration.

The last of the examined paranormal is out-of-body experience (OBE). The individual feels as if s/he has temporarily left his or her physical body and watched everything happening from above, 'through a veil' of an unrelated, independent person. It could be explained as depersonalization, "often is associated with feelings of loss of control over one's own body, actions, or thoughts" [19]. It is "coupled with a corresponding relocation of near-personal space and the origin of the body-centred reference frames" [20]. As all of the mentioned above anomalous, also the out-of-body experience can be explained by neuro-psychological science. In such a view, OBE is related to "interference with the temporo-parietal junction (TPJ) of the brain" [21].

Extrasensory Perception

The first of examined extrasensory perception is presentiment (PSE). This can be described as an ability to predict the unpredictable future. [22] suggested the presentiment “may be one way that the time-symmetries pervading fundamental physics manifest in human experience”. From the academic perspective, if student beliefs in his or her presentiment-ability, a positive precognition (e.g. regarding the result of exam) can lead a student to decrease in learning effort or, on the contrary, motivate a student to learn more hardly with the intention to confirm or over-achieve such expected result. In a negative presentiment, the student can stop any learning effort (because s/he beliefs in fail).

Telepathy demonstrates that the mind is also transpersonal [23]. Logically it also may mirror the mutual understanding, an identical view of the world, or a ‘harmony of souls’. The longer and deeper the students know each other and the greater the trust between them, the greater the resulting ability to understand without words is. Such reciprocity can underpin mutual cooperation and joint of individual learning. On the other hand, “telepathic experiences are disturbing because they threaten the integrity of the self” [23].

Clairvoyance can be described as seeing the distant events or things simultaneously with their occurrence [24]. This one is usually defined in three classes: (1) Simple clairvoyance, (2) clairvoyance in space, (3) clairvoyance in time [25]. It can lead the student to increase his or her ability of imagination. The student can visualize the curriculum and make it easier to remember.

Sixth sense belief, as the last of searched extrasensory perception, can be defined as a complex phenomenon. It draws from knowledge stored in the individual’s subconscious and is rooted in past experience [26]. It refers to the perception of input through some channel other than the five main senses, where a person appears to pick up information from other people by some unknown mechanism or transmission [5]. Because of this, parallel to student motivation and confidence can be used again.

Supported by a performed theoretical analysis, comparison, and synthesis of both phenomena groups, i.e. paranormal experience and extrasensory perception together, it makes it possible to assume that the occurrence of one is associated with the occurrence of another phenomenon. Therefore, assuming also a potential correlation of the incidence of anomalous depending on gender, two hypotheses can be established.

H1: There exist relevant relations among searched paranormal phenomena.

H2: Occurrence of paranormal phenomena depends on the gender.

METHODOLOGY

Inspired by a research effort done by McClennon (Elizabeth City University, USA) and later completed by Kohri (Japan) [27], Kokubo (Japan) [28] extended the content of the questionnaire sheet. In the current version, there are searched déjà vu, sleep paralysis, presentiment, telepathy, clairvoyance, out-of-body experience, 6th sense belief, signs of ghost, and other experiences in the questionnaire.

Japan version of the questionnaire sheet was translated to Slovak. Then, the quality of translation and semantics were discussed between Japanese and Slovak researchers. Subsequently, the pilot survey was performed at a sample of 10 Slovak students. All items were explained and small changes were done. After this, the final version of the questionnaire was distributed to the respondents.

The sample is relevant because it consisted of Slovak students, with 95% confidence level and 5% error. The respondents were students of the University of Žilina. Concretely, they attended following study programs: 1) Management, 2) Informatics, 3) Information Management, and 4) Computer Engineering. There were males and females. The average age of the respondents was 21.

RESULTS

The task of respondents consisted in expressing the opinion of what of listed 9 paranormal phenomena does he or she experience. The list of phenomena included: déjà vu, sleep paralysis, presentiment, telepathy, clairvoyance, out-of-body experience, 6th sense belief, signs of ghost, other experiences. In addition to the simple quantification of frequencies, the interdependencies of paranormal experience and their dependence on the age of the respondents were also examined for the possibility of in-depth research.

As it flows from Table 1, the most frequently experienced events were: déjà vu, presentiment, and 6th sense belief. On the other hand, the most frequently un-experienced events were: out of body experience, telepathy, and signs of ghost.

Table 1. Paranormal experience of respondents

Experience	(a) Yes		(b) No	
	Freq.	[%]	Freq.	[%]
Déjà vu	389	87.81	54	12.19
Sleep paralysis	182	41.08	261	58.92
Presentiment	324	73.14	119	26.86
Telepathy	127	28.67	316	71.33
Clairvoyance	191	43.12	252	56.88
OBE	117	26.41	326	73.59
6th sense belief	305	68.85	138	31.15
Signs of ghosts	135	30.47	308	69.53

Source: Own source

Data Analysis and Testing Hypotheses

The investigation of the respondents' responses frequency was followed by the evaluation of their relations. The analysis focused not only on identifying the significance of relations between phenomena, but also on relations between the experience and respondents' gender. Dependences' findings were examined through the χ^2 Test, the results of which were subsequently confirmed by the Product-Moment Correlation (PMC), referring to the option 'yes'.

χ^2 Test: $C=1.96$, admissible error = 5%, confidence interval = 95%, if: $z > C \Rightarrow$ not independent, if: $z < C \Rightarrow$ independent. Product-Moment Correlation: $C=0.093$, admissible error = 5%, confidence interval = 95%, if: $r > C \Rightarrow$ not independent, if: $r < C \Rightarrow$ independent.

A significant correlation was demonstrated in 15 cases (Table 2). Specifically, there exist links between following issues: déjà vu and presentiment, sleep paralysis and sign of ghosts, presentiment and telepathy, presentiment and clairvoyance, presentiment and 6th sense belief, presentiment and sign of ghosts, telepathy and clairvoyance, clairvoyance and sign of ghosts, out-of-body experience and sign of ghosts, 6th sense belief and sign of ghosts. Obtained results are interesting and contribute to the validity of hypothesis H1 (existence of relevant relations among searched paranormal experiences).

Table 2. *Confirmed correlations between experiences (15 positive correlations).*

Combinations analyzed	χ^2 Test		Product-Moment Correlation	
	z	P-value	r	P-value
Déjà vu and presentiment	6.715	<0.001	0.319	<0.001
Déjà vu and telepathy	2.723	0.006	0.129	0.006
Déjà vu and clairvoyance	3.308	<0.001	0.157	<0.001
Sleep paralysis and OBE	6.995	<0.001	0.332	<0.001
Sleep paralysis and signs of ghosts	2.001	0.045	0.095	0.046
Presentiment and telepathy	4.057	<0.001	0.193	<0.001
Presentiment and clairvoyance	5.261	<0.001	0.250	<0.001
Presentiment and 6th sense belief	3.224	0.001	0.153	0.001
Presentiment and signs of ghosts	2.157	0.031	0.102	0.031
Telepathy and clairvoyance	5.143	<0.001	0.244	<0.001
Clairvoyance and OBE	6.214	<0.001	0.295	<0.001
Clairvoyance and 6 th sense belief	2.175	0.030	0.103	0.030
Clairvoyance and signs of ghosts	3.084	0.002	0.147	0.002
OBE and sings of ghosts	3.125	0.002	0.148	0.002
6 th sense belief and signs of ghosts	5.584	<0.001	0.265	<0.001

Source: Own source

As aforementioned, the interrelations were also examined between phenomena and gender of respondents (Table 3). χ^2 Test: $C = 1.96$, admissible error = 5%, confidence interval = 95%, if: $z > C \Rightarrow$ not independent, if: $z < C \Rightarrow$ independent. The statistical significance of dependence was approved for 4 of 8 searched phenomena: déjà vu, telepathy, 6th sense belief and signs of ghosts. For example, statistically significantly more women (93.71%) when compared to men (85%) claim to have experienced déjà vu. Up to 85.31% of the interviewed Slovak female say they believe in the sixth sense.

In the case of telepathy and signs of ghosts, more than half of the male surveyed (telepathy = 76.67%, signs of ghosts = 72.67%) and female (telepathy = 60.14%, signs of ghosts = 62.94%) expressed a negative answer. Thus, most of the respondents did not feel either of these phenomena. However, there was a statistically significant difference in the area of telepathy and sings of ghosts

between males and females. Negative answers in both questions were mostly cited by a male. This means the validity of hypothesis H2 can be partially confirmed.

Table 3. *Correlations of paranormal experience and gender*

Phenomena	χ^2 Test for gender dependence		Significance
	z	P-value:	
Déjà vu	2.619	0.009	yes
Sleep paralysis	0.361	0.718	no
Presentiment	0.324	0.746	no
Telepathy	3.596	<0.001	yes
Clairvoyance	1.302	0.193	no
OBE	0.054	0.957	no
6th sense belief	5.167	<0.001	yes
Signs of ghosts	2.080	0.038	yes

Source: Own source

DISCUSSION

According to [5], recent surveys in Britain have reported that about 50% of the population believes in extra-sensory perception. It is in accordance with the results obtained in the survey presented in this paper (Table 1).

Results in Table 2 are consistent with results by [7], done on the sample of 361 respondents, which confirmed that the telepathy belief and clairvoyance belief were highly correlated. “Many beliefs were moderately correlated with experiences” [7]. A study of [29], participated by 720 Spanish university students, related sustainable behaviour to various beliefs, spirituality, transpersonal and transcendental experiences. There was confirmed an independence of sustainable behaviour from paranormal [29].

Therefore, when respecting the results presented in Table 3 (confirmed gender-dependence in 4 of 8 paranormal phenomena) and is supported by studies mentioned above, the hypothesis H1 and H2 can be considered relevant. This complexly leads to an important conclusion: paranormal phenomena should be viewed as a great inspiration for improving academic motivation. It is needed to remove negative forms of behaviour because these ones could call-up distrust, unfair and unhelping behaviour of students. Thereto, to achieve the state in which students will attract their study and will be motivated, and with regard to providing quantitative and qualitative characteristics of human potential, the relevance of searching the modern problems in education is increasing [30].

CONCLUSIONS AND RECOMMENDATIONS

Presented above results, comments and opinions lead to the conclusion that the experience or belief of students in their paranormal abilities should not be dismissed. On the contrary, modern universities should consider such phenomena and use them to improve and sustain motivation for science and learning. It is because of some paranormal experiences are caused by disturbance of psychological balance or sociological imperfections. Dis-balance can be caused by a long-term sense of self-inadequacy, a deep fear of self-failure, too high demands of university studies, allowed freedom versus the perceived family separation in campus, taking responsibility for own studies and personality cultivation, etc. It may adversely affect the functionality of the student's own self-regulation system. For this reason, when new students start their studies, it is necessary to thoroughly explain them the expected course of the studies, their duties, rights, differences from secondary education, and below. Particular attention should be paid to the question of trust and readiness of the university, faculty and all teaching and administrative staff to help students solve any problem.

Despite the fact that de facto and de jure university students are adults and require full respect, they also need a unique mixture of expressed trust, accepted autonomy and, at the same time, belonging together. In terms of psychological as well as sociological development, students are undergoing the hyper-specific intrapersonal and interpersonal changes. They increasingly assume influence and personal consequential responsibility for the selection of factors and influences shaping their personal development and their societal and professionally orientated profile. It is therefore important to alert students to possible feelings of failure, disappointment, deceptive euphoria, the danger of establishing untrustworthy relationships and contacts, succumbing to various 'releasing' substances. Such feelings are natural and are also part of university studies. It is useful to warn in advance of possible dangers and traps. And that is why it is also important to remind students that they can seek not only administrative but also psychological aid if necessary. It is imperative that faculty officials explain these questions to the students in an absolutely correct way, with full seriousness, while emphasizing the normality of such problems. Guaranteeing anonymity must be plausible.

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