



The Effect of Intellectual Biorhythm on Exceptional Children's Behavioral Dimensions

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Abstract: This study was intended to investigate whether intellectual biorhythm has effects on behavioral dimensions of exceptional children. To achieve this aim, 60 exceptional students in Tehran were selected based on Morgan table of determining sample size. Afterwards, each student filled in Seattle Personality Questionnaire twice; when the intellectual biorhythm was high and low. Then the gathered data was analyzed. The results of paired-sample t-test revealed that there was a significant difference between behavioral dimensions and high and low intellectual biorhythm. The present study displayed that the possibility of having negative behaviors is high when the level of intellectual biorhythm is low. Considering this, parents and teachers need to be aware of the importance of this biorhythm in order to lower the negative reactions and increase the self-concept and positive performance of exceptional children in society.

Key words: behavioral dimensions, exceptional children, intellectual biorhythm.

Introduction

In 1890, a German doctor called Wilhelm Fliess discovered biorhythm in human beings. While he was doing research, he found the 23-day physical biorhythm and the 28-day emotional biorhythm in his patients. After him, professor Swoboda in Austria proved the presence of these two biorhythms and made other scientists interested in studying more about biorhythm. Therefore, in 1920, the 33-day intellectual biorhythm and afterwards the 38-day sixth sense biorhythm were discovered.

Changes in the extent of a person's ability in doing things, feeling happy or desperate, having energy or lacking it are all considered as the person's biorhythm with its three important types: intellectual, emotional, and physical (Haghshenas, 2008, p. 3). Each type has a fixed period and three phases; positive, negative, and critical.

Intellectual biorhythm influences the mind's power and the quantity of learning and consists of 33 days. 16.5 days of it are in positive phase which means the brain and mind work more effectively. Thus, decision making and learning procedures are facilitated. The negative phase starts from the day 17 until 33 when the level of mind's performance, decision making, and learning are decreased. The most critical days are the ones when the biorhythm is passing from the active phase to the passive one (Daneshmand, 2004, p.11).

Being aware of the level of intellectual energy can play an important role in effective learning and better performance. Biorhythm claims that it can predict the good or bad performance of individuals on different days even about future. Willy (2003) believes that ignoring workers' biorhythm is a significant element in their low productivity. In addition, another study, conducted by Jones and Dey (1997), proved that considering people's biorhythm can enhance their performance in their education and career.

Childhood is the most vital stage when individual's personality is formed. Most of behavioral problems happen due to ignoring this critical period. Behavioral dimensions are those aspects of behavior that should be

guided in right ways by decent people unless they turn to behavioral problems and can change children's future completely. Behavioral problems are the ones that child has with his peers, parents, school, and society and they influence his educational and social performances negatively (Anisi et al., 2007).

Behavioral problems include lying, anxiety, conduct problems, depression, school dislike, and somatization.

Children's lying is one of the parents' most important problems in their upbringing and if it continues after childhood, it can cause a big worry for the parents. Lying takes place when a child describes something in a way he likes (Abdollahi, 2013). Lying can be the distortion of truth, showing the truth in opposite way, talking about something else or remaining silent about truth.

In psychological texts, anxiety is defined as an unpleasant excitement created by pressure and challenge in life and its noticeable feature is fear of future (Alamalhodaee, 2000). The individual suffering from anxiety feels miserable and believes his effort only leads to failure.

Conduct problems are behaviors formed by time and its obvious feature is remonstrance and disrespect to others' rights. Most children with this problem also experience anxiety and depression and show no enthusiasm to study at school. They have little progress or fail and as a result they have to leave school (Mirmohammadi, 2013).

Depression is the most common problem which many people including children get affected by every day. It is a strong feeling of frustration along with a deep sadness occurring after an unpleasant event in life (Sarason & Sarason, 2004).

There are many different reasons for children's school dislike such as establishing a weak relationship with the teacher, fear of getting a bad mark, learning weakness, and school loneliness. However, it seems that the main reason is separation anxiety especially for those children who are so dependent on their mothers and it causes ineffective learning and low educational improvement (Mohebbi & Mehrinejad, 2011).

Somatization is described as the tendency to experience and talk about the symptoms of physical diseases which are actually mental rather than physical. These patients often visit doctors for a physical problem, however, there is no evidence to prove they are really sick (Lipowski, 1988).

Exceptional children's education and enhancing their learning have always been a concern for teachers and parents. These children need some special facilities due to their differences from normal children; the differences include behavioral and emotional problems, memory, and lack of attention (Balouchi & Ghaffari, 2012).

To make children improve their personality, have positive self-concept, be a better citizen, avoid violence, learn effective ways of interacting with people, and getting on with others are extremely essential for living in society (Stewart et al., 2007).

Understanding the biorhythm may influence and change the exceptional children's lives and enhance their memory, concentration, and as a result their performance. Therefore, they can live happier, more successful, and confident along with less behavioral problems beside their families and peers (Rana & Iqbal, 2005).

Research Question

To fulfill the research purpose, the following research question was put forward:

- Does intellectual biorhythm have any effects on exceptional children's behavioral dimensions?

Materials and Methods

Considering the aim, the present study is a fundamental research using questionnaires for gathering data. In addition, the method used in this descriptive study was causal-comparative. From a total population of 100 exceptional students, studying at elementary schools in district 5, Tehran, 60 were selected based on Morgan

table of determining sample size as the final participants of the study. They were all male learners and their age ranged from 7 to 11. The other 40 were, therefore, excluded from the study.

The instruments used in this study were: 1-Seattle Personality Questionnaire that is a test which consists of 44 items designed in 1990. It evaluates behavioral dimensions of children who go to school. These dimensions include lying, anxiety, conduct problems, depression, school dislike, and somatization. 2- Biorhythm Software which can calculate the individual's level of energy, the physical strength, emotions, and thinking power daily. Thus, the person's different levels of energy is calculated according to his date of birth and he can see the reports of physical, emotional, and intellectual energies from his birth day until today even future days on a diagram. Knowing this information is crucial because by being aware of the presence of different energies in the body, the person can plan for his life more efficiently to enhance his performance, motivation, and tranquility.

The procedure of data collection went quite well. Initially, the researcher obtained permission from university in order to administer Seattle personality questionnaire and received a list of all male exceptional children's names and ages in district 5, Tehran and selected 60 of them randomly. Afterwards, the children's intellectual biorhythm was considered in two phases; when it was high and when it was low, based on the report the software was giving. Therefore, the questionnaire was applied twice in two different phases. Calculating children's biorhythm was easy because the diagram of every student's intellectual biorhythm could be investigated simply by entering the exact date of his birth into the biorhythm software. Consequently, the questionnaire was administered twice; in the first phase when the diagram indicated the student's high biorhythm and in the second phase when his biorhythm was low, and the necessary data was collected to be analyzed.

Results

When the participants' intellectual biorhythm was low, Seattle personality questionnaire was administered. The results are displayed in Table 1.

Table. 1. Descriptive statistics of Seattle personality questionnaire in low biorhythm

	N	Minimum	Maximum	Mean	Std. Deviation
Anxiety	60	0	2	1.69	1.15
conduct problems	60	0	2	1.74	1.64
Somatization	60	0	2	1.57	0.94
Depression	60	0	2	1.91	1.52
Lying	60	0	2	1.02	0.85
School dislike	60	0	2	1.78	1.66
Loneliness	60	0	2	1.07	0.63
Whole	60	0	2	1.446	1.470

In the second phase, Seattle personality questionnaire was applied when the participants' intellectual biorhythm was high. The results are shown in Table 2.

Table. 2. Descriptive statistics of Seattle personality questionnaire in high biorhythm

	N	Minimum	Maximum	Mean	Std. Deviation
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Anxiety	60	0	2	0.88	0.92
conduct problems	60	0	2	0.61	0.82
Somatization	60	0	2	0.87	1.05
Depression	60	0	2	0.76	1.13
Lying	60	0	2	0.55	0.67
School dislike	60	0	2	0.73	1.24
Loneliness	60	0	2	0.69	0.84
Whole	60	0	2	0.841	0.971

In order to investigate the research question of the study in finding whether the intellectual biorhythm has any effects on exceptional children's behavioral dimensions, a paired-sample t-test was performed between the scores of participants on the questionnaire in high and low biorhythm. The results are presented in Table 3.

Table. 3. Paired sample t-test

	df	T	Sig. (2-tailed)
Anxiety	29	1.68	0.00
conduct problems	29	2.21	0.00
Somatization	29	1.04	0.00
Depression	29	1.10	0.00
Lying	29	1.18	0.00
School dislike	29	0.88	0.001
Loneliness	29	1.16	0.00
Whole	29	1.56	0.000

Discussion

The primary aim of this study was to examine the possible effect of intellectual biorhythm on exceptional students' behavioral dimensions. This confirms that considering the important fact of biorhythm may lead to progression in exceptional students' performance at school and hopefully as the results of the study revealed, there was a significant difference between the exceptional children's behavioral dimensions in their high and low intellectual biorhythm which means when their biorhythm was high, their negative behavioral dimensions decreased and, hence the intellectual biorhythm had effects on participants' behavioral dimensions.

The results of this study match the results of a research conducted by Panaghi et al. (2009) in which they stated that the behavioral problems in children of parents with bipolar disorder were more than the others. That is to say depression had effects on individuals' behavioral dimensions.

This study also confirms the findings of Hosseini & Mehdizadeh ashrafi (2009) in discovering the relationship between university students' biorhythm and changes in their marks. They clearly demonstrated that the students received the highest marks when their intellectual biorhythm was high.

In addition, the results of this study are in line with another research carried out by Caroline et al. (2009). Their research displayed that there was a significant relationship between parents suffering from bipolar disorder and their children's stress. Thus, children of sick parents were dramatically more stressed than their peers with normal parents.

Finally, in another study, Foutkak (2005) evaluated the effect of low biorhythm on the occurrence of job accidents among the staff of an electricity company in North Ireland. He realized that people with low biorhythm were more likely to experience job accidents while working.

Conclusion

According to the findings of this study, it appears that the essential role of intellectual biorhythm needs to be taken in to more serious consideration since when its level is high, the exceptional children behave more positively and when it is low, the possibility of having negative behaviors goes up. Considering this, parents and teachers can lower the students' negative reactions and increase their self-concept and positive performance through some practical methods discovered based on each person's needs.

Limitations of the Study

In this research, only the male exceptional students in district 5, Tehran participated. Including more exceptional students or female students would give different results. Furthermore, not controlling some intervening variables like children's financial status or their rapport with their parents, that could highly be effective in their behavioral dimensions, was another important limitation of the present study.

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