The study of the relationship between handedness with antisocial behaviors among adolescents and young adults

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Abstract: Objective: The aim of present research was to study the relationship between handedness and anti-social behaviors in adolescents and young adults. **Methods**: For this purpose 166 individuals (minimum 14 and maximum 40 year old ones; 87 males and 79 females) were selected by cluster sampling from the 1600 individuals of Qom's correcting and training centers. Edinburgh Handedness Inventory (revised by Oldfield) was used to measure handedness. **Results**: Given that about 10% of populations are left-handed, chi-square shows a significant level of than 0.01 (20.3). The findings indicated that there is significant relationship between behaviors. **Conclusion:** The results show that handedness by itself is related to anti-social behaviors. So we need to worry about the abnormal behaviors among right-handed population.
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Introduction:

Handedness is an attribute of the unequal distribution of fine motor skill between the left and right hand man is defined. Right-handed (informal) someone who is more skilled with their right hand and Left-handed and left-handed person who is skilled and capable of doing with it. Most babies as young as 6 months of their handedness show. A minority of adults are skilled with both hands so that they can be said to be double. Handedness is an instance of the side of the body (Johnston et al, 2007; Nicolas, 2009).

In general, the right hand is more common. Right-handed people, act with her right hand when performing skilled tasks. Studies show that about 90-70% of the world population are right-handed (Holder, 1997). The left hand is less than the right hand. Left-handed, use your left hand when performing tasks, more violent show. Studies show that about 30-10% of the population are left handed (Petrovich and Hardyk, 1977). Human culture has spread throughout the global dimension is right-handed, right-handed; although the percentage of primary cultures was lower than today (Perivic, 1991). Each section or area of expertise by any regional brain function is still under investigation. If a particular area of the brain or even an entire hemisphere, injured or destroyed; sometimes it can be seen that it functions in an adjacent area or a region in the hemisphere versus considered compensate for this shortcoming, of course, depending on the area affected and the age of the patient. (Sifer et al, 2004). When one region to other regions affected by the passage through the entrance, with consequences spread to communicate information with detached areas may, on the other (indirect) way of communication intended to replace the other.

Right-handed or left-brain phenomenon is a function of the lateral (Kenchet et al, 2000). Also, as is evident from the right ear or the left side (Webster et al, 2005), but lost interest in a person, a clear indication of the place of performance is the brain (Taylor et al, 1990). In popular psychology, often broad generalizations in people with certain tag, to the side there and labels, such as "reasonable" for left or "creative" is to the right. The use of these labels should be done carefully and with caution, although the lateral dominance is measurable, however, both hemispheres are in the process of their contribution (Wstin, 2006), empirical evidence, little support for a relationship between structural and functional differences between the two parties with such a broad definition stipulates that (Tuga & Thompson, 2003).

Gazanyga 1960 investigation by the spray was carried out on patients with brain Twofoldness problem, leading to a greater understanding of Janby¬Shdn in the brains of patients with Twofoldness. This led to the discovery of many interesting phenomena in both hemispheres toward various stages of cognitive and perceptual behavior was (Kandl et al, 2000). Mac in 2009, the College of London in his book on the right, left, left-hand, argues that the proportion of the world is increasing and left-handed people as a group have historically above-quota on average receive higher gains.

Unfortunately, in many cultures historically, people who use the left hand side of the body, and consequently they are considered negative or even banned. Terra Latin word originally meant "left", but in the era of ancient Latin meaning "evil" or "unlucky" is used (Synsy trawl the dictionary, 2006). The basic premise of "pathological left-handedness" theory that left-handedness is due to brain damage during the birth process knows (Koren, 2011). However, no strong evidence for this hypothesis has not been seen and are thought to be more important in these cases have a genetic cause (America Psychological Association, 2009).

Santrak In one study noted that children of left-handedness to date with their adoptive parents are not related, but it seems that handedness is related to their biological parents. This may be a rejection of the idea of learning about left-handedness is modeling behavior of parents, but more research needs to be done in this area, and here we need to provide more robust evidence (Santrak, 2008). Handedness shows a complex pattern of inheritance. For example, if a child's parents are left-handed, only 26% is likely to be left-handed children (Mac Mounas, 2003). A large study of twins over 25,732 households was conducted in 2005 by the Midland and colleagues showed that about 24% is caused by the inheritance of handedness. This is about three-quarters of its effect can be explained by environmental factors. They believe that a gene associated with left-handedness in women positive and negative relationships with men. This may be due to handedness in men than in women (about 12% of men vs. 10% of women globally) to explain (Papadatv et al, 2008). Almost every aspect of the autopsy gender effect on neurological and physiological psychology is evident. Due to the differences between men's and women's side of the brain can be true and the male brain than the female brain is generally accepted that the more peripheral (Mac Kobe and Alanvar, 1974). Also indicative of the emotional side asymmetric control over emotions and processing in the brain was important. Also there is no evidence that parts of the brain functions. Emotions are very complex and involve a variety of physical and psychological responses that many of them are still not well understood. The overall goal is to produce an emotional reaction to a stimulus might be special. Consciously perceived feelings of emotions, and when an emotion occurs frequently or constantly to temper the call (LEN, p.16).

The right hemisphere, the left hemisphere is toward more control of the emotions (Lane, p 79-80). The right hemisphere for processing basic emotions like fear is important, while the left hemisphere is important for processing social emotions (Lane, p 332). In general, the right hemisphere of general waste reduction or elimination of electrical skin response (skin conductance response SCR) to emotional stimuli is significant. While lesions in the left hemisphere did not show changes in response SCR considered (Len, p 192). Thread 2046 SB- the right part of his prefrontal lobe was removed because of cancer and IQ and most other functions seemed normal and she had suffered, but he was severely impaired decision making skills specially when considering the need for immediate reward and punishment against the consequences of not doing it in the future (Len, S80-79). Researchers provided the patient with a sense of emotional nonverbal stimuli 2046 SB-'s (rewarded or punished) failed. But he was unable to conditioning stimuli were emotional words with meaning. Most of the production and processing of language in the left hemisphere occurs while the majority of emotional processing and production of emotional speech in the right hemisphere of the brain occurs. Also, the lower right-hand side lead to an increase in the right hemisphere considered. The two hemispheres are specialized for different aspects of emotions might have evolved (Bach, 2009).

The left hemisphere of emotions as "positive" and the right hemisphere emotion processing mostly "negative" considered. Much of the area is mainly in the right hemisphere during classical conditioning of harassment are active (Hachinsky and Ozkan, 2008). It seems that the idea of establishing some sense true, but, in some cases outdated, however, are some examples. For example, one study showed that when people hear before they were confronted with consistent and positive stimuli, their left hemisphere was more active than the right hemisphere (Alfredo and Kimeinu, 2008). In contrast, when faced with an initially negative stimuli, the right hemisphere than the left hemisphere was more active.

The role of the in vigilance and awareness of emotions (feelings), resulting in the obvious sense, but studies show that left a distinct role in conscious and unconscious processing of emotions are responsible for. Right plays an important role in the processing of unconscious emotions. The left is involved in emotional processing and consciousness (Valvertigra and Rogers, 2005).

In another model, called the stationary base neuroanatomy of emotion for the emotional control and processing are indicated by suggests that the peripheral autonomic nervous system is not symmetric. Afferents on sympathetic and parasympathetic components of the autonomic nervous system, to maintain homeostasis in several different organs such as the heart and the force of

their investment is important. Representation of asymmetry in the peripheral nervous system automatically leads to its representation in the brain. The left hemisphere is activated mainly by afferent neurons associated with parasympathetic functions of the right hemisphere of the static often associated with the functions of the sympathetic afferents activated. Side of the belt is very evident in the cerebral cortex of the former (ACC) and the cerebral cortex of the island like the former (AI) associated with higher levels of emotions such as love, romance and motivation in relation to the performance of the static actor. AI and ACC activation in both the left and right sides and a close friend can be a pain when it is analyzed. While the AI and ACC are right that the subjective feelings of pain are raised. This evidence suggests that the emotions evoked in the right AI (sympathetic) and AI left feeling (parasympathetic) is related. It is unlikely that the evolution of brain asymmetry in the control of emotional behavior. However, it seems likely that some of the nerves that control the asymmetry is caused by excitement, the observed asymmetry is largely the product of asymmetric control other functions such as motor control, language or sensory processing complex (Bach, 2009).

Laterality phenomenon may be an evolutionary adaptation (Rogers, 2005). The full range of accessories may not be permitted to express the emotions. Left plays an important role in language processing. While the right temporal cortex is involved in processing faces. This side is also clearly seen during emotional processing. A possible difference in brain activation between women and men is considered. Activity in the right hemisphere in women more than men when exposed to unpleasant pictures, although men showed greater activation bilaterally in a place that is pleasant pictures.

Another study showed that women with broad activity of the right hemisphere in face to face unpleasant views the left hemisphere activity as figures show a pleasant face to face (Rodó et al, 2003). However, another study documented differences in sex differences in the parietal lobe and frontal waves in the show. These images indicate that the activity of the left hemisphere in women than men, and the right hemisphere in men than women when shown unpleasant pictures. 70% of right-handed subjects in view of emotions (in left field) give priority to the show and this means that the right brain hemisphere is dominant in expressing emotions. It does not seem to affect the processing of facial expression is linked to the theory of handedness (Rodó et al, 2003). In general, conditions that contradict the moral teachings, they produce negative emotions. See other bad behavior by breaking moral norms are usually the most significant activity in the right Parakmpal gyrus, middle frontal gyrus and right amygdala to the right shows (Carla and Haman, 2006).

Find the right amygdala activity to the most adverse conditions thrill seeking. This study suggests that peripheral processing of emotions beyond the basic emotions towards higher-level cognitive responses is developed. Individuals with mood disorders are more active than negative stimuli in the excitement of the show. When negative stimuli were presented to the right hemisphere, patients were significantly more accurate and faster response to that stimulus. The data in this study suggest that mental disorders are associated with an increase in the side. Patients with damage to the left amygdala in the face of normal individuals show less frightening assessment (Len, Ss230-228). Similar findings have shown that the Regional blood flow increased in response to fear faces. While the euphoria and joy to the faces of the flow in the left amygdala was decreased (Kariba Fernandez et al, 2002).

Using PET, researchers found that activity in the medial and lateral cortex of the left frontal bone in front of mutually associated with reduced activity in the amygdala. Left prefrontal cortex plays an important role in behavioral approaches (positive emotional appeal) plays an important role in the behavior of output, while the amygdala (emotions with negative gravity) plays (Len, p 383). Frontal gyrus region that is highly significant when the grief process is activated (Vitale and Haman, 2010). Gyrus of the left anterior IFG plays an important role in the fury of his shows, while the right IFG plays a major role in disgust. Large temporal gyrus significantly and meaningfully as the most active region in the process is happiness (Vitale and Haman, 2010). Big right temporal gyrus in response to increasingly exhilarating reacts to stimuli, while core padding-left (in the brain) are increasingly a frightening stimulus-response (Len, S230- 228).

Padding-right annoying nucleus is active during conditioning (Len, S237-233). Moreover, although some functions are functions of the components, these functions are only a trend. However, in many cases the process may significantly vary significantly as a function of the particular implementation. The differences in the discovery and cause and effect or impact of a specific function of the brain, including the distribution of senile autopsy abnormal dendritic structures show neurotransmitters.

The structure and function of brain chemistry between the two hemispheres or between the two hemispheres of the brain, still hemispherectomy (removal of one hemisphere of the brain), used for the study has been considered. No

one can not find a "left-brain only" or "just right" brain is true (Gosuami, 2006). In a study titled Kosan handedness and sociopathic by Mayer (2000) at the University of Chicago, Check that sociopathic disorder may be associated with a pattern of abnormal brain structure. For this purpose, 420 adult male prisoners in the county jail and the scale of Chapman and Chapman were studied.

Although the results of this research Reporter sociopath disorder by reducing the dominance of the right hand, but it can not be for differences in age, IQ, or race won. These findings suggest that brain disorders sociopathic criminals-is associated with an abnormal asymmetry. In other research, Raymond (2004) Murder and negative frequency handedness in its rural population of Dominica between the frequency of left-handers and homicide rate review and positively correlated (Spearman correlation coefficient duplex $\rho = 0.83$, $\rho = 0.01$) in obtained showed that there is significant difference between the rates of homicide. Also, Ross Little, Nathan Poe, Marshall (2005) also studied the relationship between left-handedness and brutality of the violence showed that a higher percentage of minorities in traditional societies is left-handed.

The high murder rate and the number of people among the Yanomamo people of Venezuela were committed Dyala Burkina Faso and endorsing this theory. Stanley (2006) study concluded that exposure to prenatal testosterone, leading to the handedness of the child and his criminality is developed in high school. He has 694 men for three years with seven indicators of delinquency in schools tested. Evidence that lefties are more likely to exhibit behaviors underlying offense, that the evidence is indirect, behavioral effects of testosterone is assumed.

Strauss and Dennis (1981) studied the relationship between personality and behavioral disorders, found that left-handers, higher rates of depression and schizophrenia compared to normal populations showed. The study also showed that patients with schizophrenia, who were left-handed compared with 70% of the right hand, were more impaired thinking process. Since most studies of other cases in the study on this topic have been conducted on adolescents and youth, the purpose of this study was to determine the relationship between handedness and anti-social behavior in adolescents and young adults are at the heart of education reform.

Method:

The aim of this study in terms of functionality and in terms of how to collect data from field studies are descriptive and branches and its population includes all people with mental damage of anti-social behavior care and education reform at the center of the city of Qom in the year 2012-2013, respectively. The population of about 1,600 people was considered the 0.5. Because in this case, the maximum possible value of their finds. This has led to a large enough sample and the sample of 166 subjects (87 males and 79 females) using cluster sampling were selected randomly.

Table 2 shows the demographic characteristics. Table 1: Distribution of participants according to gender, Right Hand, Left Hand and specifies was considered. To measure the handedness of Edinburgh Handedness Inventory (Oldfield, 1971) was used.

Table 2 shows the demographic characteristics. Table 1: Distribution of participants according to gender, Right Hand, Left Hand and specifies was integrated. To measure the handedness of Edinburgh Handedness Inventory (Oldfield, 1971) was used. This questionnaire is a 10-point hand preference in writing, drawing, throwing-up, scissors, brushing, use a knife, a spoon, light matches, opening and closing the door can be measures. The +100 scope of the right-hand and left-hand score of 100 as was approved.

Reliability and validity of the questionnaire has been studied in various countries and the overall Cronbach's alpha coefficient of correlation between the two halves of the 0.92-0.97 questionnaire (see informed Alipur and Harris, 2007). Also the validity of the questionnaire was correlated with handedness questionnaire was 0.75 Chapman (Ali Pour, 2006). Therefore, 166 data handedness questionnaire also collected data was analyzed using software SPSS16. Enjoy the abundance of data analysis and chi-square tests and Cronbach's alpha was used for reliability questions.

Findings:

On average 5.79% of the participants in this study, 13.3% of the activity with the right hand and the left hand is doing. The number of persons of both sides can be reduced to 2.7.

Analysis of results

Hypothesis: between handedness and anti-social behavior (ASB) in adolescents and young adults, correcting and training centers of Qom there. Both hypotheses were tested by statistical model comparison test.

Due to the fact that ten percent of the population is left-handed, as the test shows both achieved statistical significance level (3.20) at 0.01 meaningful. Therefore, the null hypothesis at the 99 percent confidence level 0.01 concluded between handedness and anti-social behavior (ASB)

Adolescents and Youth Rehabilitation and Training Center of Qom significant relationship exists. So that the frequency indicated, data compression, otherwise the right hands, this could be a possibility that adolescents and young adults at the Center for Rehabilitation and Training Qom antisocial behaviors than adolescents and young people are right handed.

Table 1: gives the distribution of handedness among adolescents and young people in a juvenile institution Qom ten activities.

Left Hand		two sides		Right Hand		Activity
Percent	Frequency	Percent	Frequency	Percent	Frequency	
12.7	21	3.6	6	87.7	139	Drawing Painting
13.3	22	8.4	14	78.3	130	Throwing up
12	20	4.2	7	83.7	139	SNIP
12	20	8.4	14	79.5	132	Brushing
13.9	23	4.8	8	81.3	135	Writing
13.3	22	7.8	13	78.9	131	Use the knife
12.7	21	5.4	9	81.9	136	Use a spoon
11.4	19	9	15	79.5	132	Matches
15.1	25	9.6	16	75.3	125	Open the box lid or Bottle
13.9	23	11.4	19	74.7	124	Sweeping
13.3	22	7.2	12	79.5	132	Average

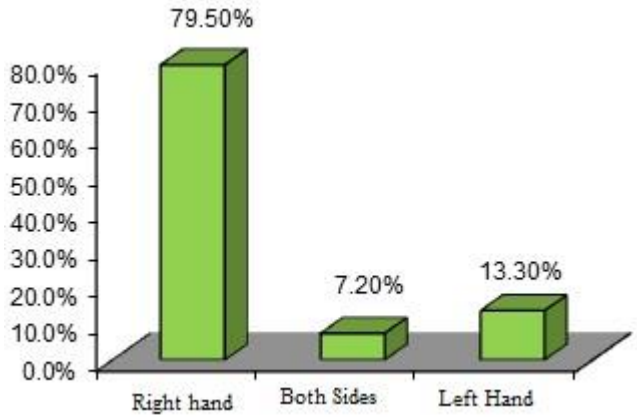

Figure 1- column chart handedness of eighteen adolescents and youth centers Qom

Result and Discussion

Table 1 Demographic information of the sample, as can be seen, the average 79.5% of participants is equal. In this study, the activities with Right have no problem. A Hardik finding (1977) is consistent. The minority of adults 7.2 percent of their receipts to the study of Johnston, King and Shields (2007) and (2009) is consistent.

65.7% of the associate's degree level subjects. 10.2% of people are illiterate. The number of respondents with a high school diploma or higher to 24.1 percent is important.

The finding of this study with findings of Navidi Moghadam, Bakhtiari, Ahadi and Sanaei (2008) on education and anti-social behavior is consistent.

The main research hypothesis that handedness and antisocial behaviors among adolescents and young Qom There correcting and training centers were evaluated and considering the fact that ten percent of the population are left-handed, as the test indicates the statistical significance of these results (20.3) at 0.01 is meaningful.

Thus, the null hypothesis can be rejected at the 99 percent confidence level 0.01 concluded between handedness and anti-social behavior (ASB) in adolescents and young adults, correcting and training centers of Qom significant relationship exists.

Suggestions:

Based on the findings of the research and background investigation, the officers and senior managers to enhance preventive measures and treatment as soon as these people, it is recommended following notes:

1. for correctional and health promotion for staff and patients in care centers have ongoing meetings, meetings in order to get better acquainted with the work on groups with diverse applications of psychology and counseling into the API.
2. To promote the health of people in care and those with merit greater attention to identify and work with them to consider the type of handedness. An improvement in compensation and justice between them seems very impressive.
3. For optimal performance of individuals in our study, develop, reward and peripheral stimuli should be considered to promote the development and cooperation of these people deserve to be made.
4. Due to the small population study suggests that the top left of the left lead and the fee for criminal conduct comprehensive research done.
5. The people's self-concept can be considered depending on handedness.
6. This can be in the lower age groups studied in children with conduct disorder.
7. Recommended prior to school entry handedness of individuals identified and archives in the country or place of birth registration to be considered for future research.

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