

ORIGINAL ARTICLE

Evaluation of Clinical Anger Scale among Clients Referred to Fars Legal Medicine Centers in south of Iran

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ABSTRACT

Anger is a feedback mechanism in which an unpleasant stimulus is met with an unpleasant response. Anger is a natural emotional response that people use to be protected. We evaluated the Clinical Anger Scale among Clients referred to Fars Legal Medicine Center by Snell's Clinical Anger Scale Questionnaire. Questionnaires were given to clients of Legal Medicine Centers. The total Clinical Anger Scales were calculated. The results were evaluated by sex, age, job, marriage status, education level, income level, place of living and the reason of referring to legal medicine centers. In the study on 1884 people with average age about 31 years old, like 70% of them were male & the rest 30% were female, 70% lived in the cities and about 34% of them were self employed, most of them were married and the education level of most of them was up to guidance school. In this study we have found the following results: CAS is higher among female clients. In this population with mean age of 31 ± 12.13 Std deviation, By raising the age, CAS decreases. CAS in students and workers is higher than the employees. It is also higher in idle people and housekeepers than other groups of job. CAS in divorced clients is higher than Single and married ones. CAS in illiterate clients is higher than every other groups. CAS in clients with low level of income is higher than ones with intermediate and good levels of income. There is no meaningful relationship between CAS and the place of living. CAS in passengers of guilty drivers is higher than the guilty drivers. In order to have a better society, the studies should be continued and some solutions should be found to solve problems of the groups with higher levels of Clinical Anger Scale, that means attention should be paid to women, young people and divorced ones, and also the government and the politicians all over the world should help to eliminate the sanctions, and so; making some facilities for people to get jobs, simplifying education for them and bringing a life full of pacification to the Iranian people.

Keywords: Anger, Clinical Anger Scale, Snell, Legal Medicine Center, Iran

Received 21/09/2016

Revised 28/11/2016

Accepted 18/12/2016

How to cite this article:

A Firouzabadi, M Zarenezhad, S Gholamzadeh, N Pakniyat, M Hossein Etezadi, M Azizi: Evaluation of Clinical Anger Scale among Clients Referred to Fars Legal Medicine Centers in south of Iran. Adv. Biores. Vol 8 [1] January 2017: 129-133.

INTRODUCTION

Anger is a natural emotional response that people use to be protected [1]. A study on children of about 8 years old showed that there were heritable aspects of anger not explained by a common genetic factor [2]. A recent study showed that the different levels of anger in different races is because of different inflammatory physiology (IL6 and Fibrinogen levels) [3]. A research which was performed on rats revealed that there are some specific genes which are related to anger presentation [4]. In a Multi-ethnic Study of Atherosclerosis it is revealed that anger is a risk factors for Type 2 of Diabetes Mellitus [5]. Some medical conditions like iron deficiency without anemia may be a risk factor for anger, fatigue, and tension in women of childbearing age [6]. Assessment of anger proneness is important for prevention and management of heart failure, especially in men [7].

Anger is significantly associated with developing myocardial ischemia during mental stress [8]. A recent

study revealed that there is a relationship between developmental differences and anger presentation [9]. There are some relationships between anger expression and people's personalities. In a study which was done on alcoholic people with suicidal attempts, a significant positive correlation was found between anger expression inward and neuroticism [10].

Anger is a feedback mechanism in which an unpleasant stimulus is met with an unpleasant response. Anger is a natural emotional response that people use to be protected. We evaluated the Clinical Anger Scale among Clients referred to Fars Legal Medicine Center by Snell's Clinical Anger Scale Questionnaire

METHODS

The study was performed on the basis of the test "Clinical Anger Scale" which is designed to measure the psychological symptoms presumed to have relevance in the understanding and treatment of clinical anger. Twenty-one sets of statements were prepared for this purpose. The following symptoms of anger were measured by the CAS items: anger now, anger about the future, anger about failure, anger about things, angry-hostile feelings, annoying others, angry about self, angry misery, wanting to hurt others, shouting at people, irritated now, social interference, decision interference, alienating others, work interference, sleep interference, fatigue, appetite interference, health interference, thinking interference, and sexual interference. Subjects were asked to read each of the 21 groups of statements (4 statements per group) and to select the single statement that best described how they felt (e.g., item 1: A = I do not feel angry, B = I feel angry, C = I am angry most of the time now, and D = I am so angry all the time that I can't stand it). The four statements in each cluster varied in symptom intensity, with more intense clinical anger being associated with statement "D." Each cluster of statements was scored on a 4-point Likert scale, with A = 0, B = 1, C = 2, and D = 3. Subjects' responses on the CAS were summed so that higher scores corresponded to greater clinical anger (21 items; range 0 - 63).

There are some studies for evaluation of validity and reliability of the "Clinical anger Scale" questionnaire by its main designer (William E Snell). The internal consistency for each 21 statements of the test analyzed by Cronbach Alpha and the validity coefficient of 0.94 was obtained that confirms the high validity of the test. Test-retest analysis also was done which revealed that the correlation between the components of the test is 0.78 that shows the high reliability of the test.^[Snell,1995]

Since January 2011 till January 2015, 1984 cases who had consent, willingness and complete documents were studied. The subjects were chosen by convenient sampling which means we asked everyone came to legal medicine centers and inclines to attending to the research to answer all 21 questions of the test, in randomized days. The test was explained to illiterate people in order not to miss their idea. We asked everybody to write their sex, age, job, marriage status, education level, income level, habitance and the reason of referring to legal medicine centers down. Labels of these variants are as follow:

1. Sex : male and female.
2. Age: the exact age by year.
3. Job : idle or housekeeper, worker, employee, self employed, student, soldier.
4. Marriage Status : Single, married, divorced, widowed.
5. Education : illiterate, primary school, guidance school, high school and high school graduate, associate, bachelor of science, master of science, PHD or GP and above.
6. Income : low, intermediate, good, excellent.
7. Habitanace : village, city, province.
8. Reason of referring to legal medicine centers : fight, pedestrian, guilty driver, not guilty driver, passenger in the vehicle of guilty driver, passenger in the vehicle of not guilty driver, work accident, others

All these data was analyzed by IBM SPSS version 19. The relation of each item was collated with total clinical anger scale. This relationship was calculated by T-test for sex, by Pearson correlation coefficient, and by one-way Anova for the rest.

In order to evaluate the validity and reliability of the test first, 60 cases were studied and the data was analyzed by IBM SPSS version 19. In evaluating the validity, the Cronbach Alpha was 0.924 which means that in Iranian population also the test has a high validity. Since the amount of Cronbach Alpha by deleting each question was very close to each other, so that there was no need to delete any question.

In order to evaluate the reliability of the questionnaire, we used the method of splitting the questionnaire into two parts. The Chronbach Alph for the first part was 0.833 and for the second part was 0.898. Since the Cronbach Alpha is high for each part, this questionnaire in Iranian population also has high reliability.

RESULTS

The current study was done on 1884 people with average age about 31 years old, like 70% of them were male and the rest 30% were female, 70% lived in the cities and about 34% of them were self employed, most of them were married, the education level of most of them was up to guidance school and about 62% of clients had average level of income. Statistical analysis of the clinical anger scale differentiated by gender was performed by T- test. Statistics showed that women have higher levels of total clinical anger scale than men with P value of 0.001. Statistical analysis of the clinical anger scale differentiated by age was performed by Pearson correlations coefficient.

Statistics showed that by increasing the age, the total clinical anger scale decreases. (Pearson Correlation $N = -0.0052$)

Statistical analysis of the clinical anger scale differentiated by job, Marriage status, education, income, habitance and the reason of referring to FLMO were performed by one way ANOVA. Statistics shows that the clinical anger scales in idle people and housekeepers are higher than the workers, the employees, the self employed ones and the students. The CAS is higher in the workers and the students than the employees. No meaningful relationship was found in other comparisons. ($f = 16.39$, Sig. = 0.001)

The Study shows that the CAS in the divorced people is higher than the single ones and married ones. No meaningful relationship was found in other comparisons. ($f = 2.029$, Sig. = 0.108).

The CAS in illiterate people is higher than the ones with every other levels of education. This scale is also higher in people with education level of primary school than the ones with education level of bachelor and master. Also the CAS in people with education level of guidance school is higher than the people with education level of high school, associate, bachelor and master. No meaningful relationship was found in other comparisons. ($f = 5.7$, Sig. = 0.001).

The study shows that the CAS in people with low income is higher than the ones with intermediate and good incomes. No meaningful relationship was found in other comparisons. ($f = 8.313$, Sig. = 0.001).

No meaningful relationship was found in comparison of CAS and habitance. ($f = 1.476$, Sig. = 0.229). The study surprisingly shows that the CAS in the passengers in the vehicle of the guilty driver is higher than the guilty drivers. No meaningful relationship was found in other comparisons. ($f = 1.172$, Sig. = 0.316).

DISCUSSION

Previous studies revealed that our brain can detect anger in a male face better than a female face [12]. Study on Nordic students showed that anger symptoms in female students is higher than male ones [11]. Current study also revealed that the level of clinical anger scale in women is higher than men. This fact emphasizes the necessity of concerning about women and decreasing their stress.

A research showed that anger is common among younger adults [17]. Another study showed anger is one of the main reasons of adolescents' reference to the counseling centers and getting help for anger control [1].

Our study also revealed that by increasing the age, anger decreases. So we should pay the most attention to the group of young adults.

A previous research showed that positive work factors may be protective against emotional exhaustion [15]. In recent study the results show that the level of clinical anger scale in students and workers is higher than employees, and this level is the highest in idle ones and housekeeper women. This fact emphasizes on the necessity of making job positions in the society.

In families, greater levels of affiliation and lower control by partners are associated with less anger and greater relationship quality [16].

As a confirmation the current study showed that the level of clinical anger scale is higher in divorced people in comparison to the single people and the married ones.

Some previous researches revealed that educational status is linked to higher anger control specially in men [13, 14].

Our recent study also confirms this issue. Anger in illiterate people is higher than every other groups of people with every levels of education. Over all the level of anger is lower in people with higher levels of education. This fact emphasizes the necessity of spreading the facilities of education all over the society.

As it may be expected, the lower the income is, the higher the anger is. A study which was performed on several mothers showed that empowering women to overcome poverty and some other factors may allow them to manage feelings of anger [18].

Our study also showed that anger in people with low income is higher than people with intermediate and good levels of income. So it again emphasizes the necessity of making job positions with acceptable salary in the society.

A study which was done on women aged 40-65 years old showed lower anger feeling among women living in rural areas compared to those from urban settings [21]. Another study which was done in one of the provinces of Iran showed that city habitants are more aware of recognizing violent behaviors, outcomes, and causes, in comparison to villagers [19].

The recent study did not show any relationship between anger and habitance.

A study which was performed on showed that only "arrival-blocking" anger is a significant positive predictor for all types of aberrant driving behaviours [20]. Another research suggested that interaction with an in-vehicle software agent can improve a driver's psychological state and increase road safety [20]. Our study showed that the level of anger in passengers in the vehicle of the guilty driver is higher than the guilty drivers themselves. It may show since the passengers are passive and they have no role in the accident they feel more anger because of being in such a condition than the drivers who caused the accident and made the fault.

To put it all together, it should be said that in Iran, according to the cultural pressures, Inequality of income and Expense, the wrong culture of driving and at last the political and economic sanctions, the level of clinical anger scale is high. Therefore, the authorities of the country, the government and the diplomats from all over the world, each according to their duties and abilities, should endeavor to improve these situations and help the Iranian people to experience a life full of pacification.

ACKNOWLEDGMENT

Special thanks to all the legal medicine centers staff.

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