The Relationship between Personality Characteristics and Driving Behavior
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Abstract—The present study investigated the relationship between personality characteristics of drivers and the number and amount of fines they have in a year. This study was carried out on 120 male taxi drivers that worked at least seven hours in a day in Lamerd - a city in the south of IRAN. Subjects were chosen voluntarily among those available. Predictive variables were the NEO Five-Factor Model which describes the five NEO personality factors (1. conscientiousness, 2. openness to experience, 3. neuroticism, 4. extraversion, 5. agreeableness). The criteria variables were the number and amount of fines the drivers have had in the last three years. The result of regression analysis showed that conscientiousness factor was able to negatively predict the number and amount of financial fines the drivers had during the last three years. The openness factor positively predicted the number of fines they had in last 3 years and the amount of financial fines during the last year. The extraversion factor both meaningfully and positively could predict only the amount of financial fines they had during the last year. Increasing age was associated with decreasing driving offenses as well as financial loss. The findings can be useful in recognizing the high-risk drivers and leading them to counseling centers. They can also be used to inform the drivers about their personality and its relation with their accident rate. Such criteria would be of great importance in employing drivers in different places such as companies, offices etc…

Keywords—drivers, financial fines, neo five-factor personality

I. INTRODUCTION

PERSONALITY is the impression an individual makes on others. It refers to his/her social skills, charismatic qualities and the like. Personality is generally defined as the individual unique and relatively stable patterns of behavior, thoughts and emotions. Personality psychology is a branch of psychology that studies personality and individual differences. Personality psychology is not the only branch of psychology whose subject matter is poorly defined. What, for example, is the subject matter of social psychology? It seems to be an evaluation of how “situations” influence social behavior [5].

The purpose of present research is to study the relation between a driver personality and the amount of his financial fines. The findings of such studies can be used for recognizing the high-risk drivers and providing useful suggestions for decreasing the accident rate in society. They can also help different organizations to employ low-risk drivers. Traffic engineers mostly consider transportation base construction and other non-human factors as the main causes of accidents and drivers’ disobedience of traffic rules [6] -[4] -[9] while researchers see their personality important in this regard [2] -[13], [14].

Regarding the factors affecting the driver’s personality, Personality psychologists in the early 1990s almost all together came to the conclusion that the individual differences in average people tend to be based on five dimensions :1) Neuroticism, Agreeableness, conscientiousness, extraversion and openness [8]-[16]-[18] Although it is unlikely to be an internal correlation among these factors, specifically between Neuroticism & extraversion, and extraversion & openness. All these factors together develop a complete set of behavior orientation, constant feelings, and cognition patterns [17].

People with high extraversion are mostly positivist, optimistic, inclined to risk, tending to crowded places and adventures. Those with high conscientious are likely stronger and more independent, capable, responsible and meticulous.

Those with Agreeableness are friendly and very eager and interested in others and are eager to help others. Those with high Neuroticism are relatively uncertain and easily get agghast, upset, angry and violent. Theoretically, a nervous person tends to do certain behavior under the pressure of the society.

Those who possess the openness dimension are of the ability to accept various experiences and different cultures, and to be more curious and imaginative [10]. Generally the five factors of personality have integratively presented a model for personality theories [7,p.260]. Five-factor model that included self report items is based on participants’ experiences, attitudes, motivation and individual senses [1].

II. METHODOLOGY AND INSTRUMENT

This study was carried out on 120 male taxi drivers that worked at least seven hours in a day in Lamerd - a city in the south of IRAN. Subjects were chosen voluntarily among those available. The five NEO great personality factors were the predictive variables. The criterion variables were the number and amount of fines the drivers have had the last three years. In this study, the R-NEOPI Questionnaire has been used. This questionnaire [15] as one of the recent tools in the field was introduced by McCrae and Costa (1985) as the NEO Personality Inventory.

This test is based on the five -factor model which describes individuals in terms of five fundamental traits: conscientiousness, openness to experience, neuroticism, extraversion and agreeableness. The Five Factor Model was developed by the study of adjectives where it was assumed that over time all important measures of personality would be encoded into language.

The first researchers in this are gave study participants long lists of adjectives and told them to rate them on how much each applied then used a technique called factor analysis to try and boil down their answers to underlying independent factors.

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III. RESULTS

In addition to the descriptive results of the study (Table I), the results of the symmetric regression analysis (Tables II, III, IV and V) showed that the Agreeableness factor negatively and significantly could predict the number and amount of the fines the drivers had in a year and during the last three years. Conscientiousness factor also predicted positively and significantly the amount of financial fines in the past year. The extraversion factor both meaningfully and positively could predict the amount of financial fines they had during the last year and the number of offenses during the last three years. Increasing age was associated with decreasing driving offenses as well as financial loss (Table VI).

IV. CONCLUSION

So far different scholars have given different answers to this question “Which one of the above factors has the most influence in the disobedience rate of drivers”? Extraversion factor [5], flexibility [14]-[3] Agreeableness [2], were reported. Various research results can be justified through questionnaire type, geographical and cultural region, the sample, and methodology. But the results of the meta-analysis of personality characteristics on the amount of traffic accidents have shown that in addition to transport infrastructure and traffic characteristics, personality characteristics also can be powerful factors to predict accidents and driving offenses [4]-[12]-[11]. Due to high rates of accidents in countries, [9] recognizing the high-risk drivers and introducing them to counseling centers is of great importance. It is recommended that drivers should be informed of their personality characteristics and their correlation with the rate of accidents.

REFERENCES


