On the Relationship between Addiction and Social Security in Urban Community

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Abstract

Objective: This paper is an attempt to explain the relationship between social factors and tendency to addiction and determine the relationship of this tendency with social insecurity. In addition, the contribution of each of the social factors that lead to social insecurity is determined. Method: The current research method is descriptive. At first, the relationship between the research indices (family, neighborhood, unemployment, etc.) and tendency to addiction was described. Then, the relation of this tendency with social insecurity has been expressed. In the following, the contribution of each of these factors in the estimation of social insecurity has been determined. Results: The results showed that the indices under study are significantly correlated with tendency towards addiction and social insecurity. The most important predictors of social insecurity were respectively as follows: other factors (extent of border with Pakistan and Afghanistan, international and regional trafficking activities, the booming market of drugs, etc.), anomic situation, industrialization, family, friends and peers, access to drugs, unemployment, and finally neighborhood. Conclusion: Such variables as family, neighborhood, friends and peers, anomic situation, access to drugs, industrialization, and unemployment play a significant role in social security. Keywords: Addiction, Genetic Algorithms, Industrialization, Social Insecurity, Anomic Situation
Introduction

Drug dependence and abuse is a disease. Substance dependence disorder is a very complex and multifaceted mystery with global dimensions (Nabdel, 2010). Drug addiction is a mental chronic and relapsing illness that is associated with severe motivational disorders and loss of behavioral control (Dallas, David & Julie, 2010). According to the report released by the UN Office on Drugs and Crime in 2012, about 230 million of the people around the world have tried drugs in 2010. This constitutes a population of over 5 percent of people older than 18 years. From this percentage, the number of 27 million individuals is addicted to drugs. In addition, the trend of illegal drug use has been stable, although some developing countries are witnessing an increase for disorder (World Drug Report, 2012). Use of narcotics drugs has received more attention than other high-risk behaviors for various reasons, including cultural, social and economic issues. Trade of drugs has become one of the most profitable businesses in the world while the sales purchase, and consumption of drugs is illegal almost in all countries (Danaea, 2015). The need for the recognition of the levels and dimensions of this social problem is felt more deeply when it becomes evident that the United Nations regards addiction phenomenon as an organized crime and has issued various conventions and protocols to deal with it- 1961 and 1971’s conventions, 1972’s corrective protocol, and 1988’s Convention. The extensive volume of trade and financial spin associated with drug trafficking mafia in both regional and global terms has made this issue very considerable in the world (Hashemi, 2004). The statistics pertaining to national drug epidemiology conducted by the Institute for Humanities and Cultural Studies in 2011 show that the approximate number of addicts in the country is 1,325,000 million people, out of which approximately 91% are men (a Look at the Epidemiological Design, 2011). Drug use, especially opium use, has a long history in the country. According to estimates of the United Nations Office on Drugs and Crime in 2009, 40% of the drugs are found in the form of opium and the rest are largely found in the form of heroin. The statistics published by the UN Office on Drugs and Crime in 2010 show that 42 percent of the world's opium is consumed in Iran (World Drug Report, 2010).

There exist more than 40 developing theories about the etiology of drug use and addiction disorder. In a general categorization conducted by Literi, et al. (1984) interaction with the selves, others, society, and nature have been introduced as the main foundations of interactive perception for the incidence of addiction. Substance abuse was introduced as a social problem when social phenomena such as urbanization and industrialization came into existence. The rules and requirements arising from industrialization led to the incidence of some tensions in the personal and social levels. Urban anonymity not only led to the reduction of the regulatory role of family, but it also reduced the regulatory role of religion, as well. This anonymity doubled with human self-alienation. Human's insatiable desires led to an increase in the tensions and deprivations and
this caused humans to seek their peace and convenience in taking refuge into drugs. Finally, when problems became unbearable, they turned to addiction. The issue of drug-related offenses is one of the most complex challenges, from which Iranian society suffers right now. The growth of drug-related offenses in Iran has led to an increased awareness that Iran is facing a major social problem (Safari, 2003). Social Security is one of the critical components of national security that is affected by variables such as the absence of addiction, loss of crime, growth of hygiene, and so on. Social security is some tranquility and peace of mind that every society is bound to create for its members (Biggs, 2002). Some experts define social security as a means for the empowerment of the community so that its basic and fundamental characteristics can be protected under the change conditions and objective threats. They lie emphasis on social security as a connector between the community's identity and security. Social Security can be considered as an overarching public safety that may cover higher collective security domains. Undoubtedly, no element is more important than the element of security and peace for progress, development and evolution of a society and for actualization of talents. Indeed, social development, creativity, and valuable activity will not be possible without security (Ferrara & Tanner, 1998).

Today, security is the most basic and the key discussion of human societies in terms of various social aspects. This security may be at play in social and judicial dimensions and even in the feeding of communities and families. Social Security is of both subjective and objective. In terms of the objective dimension, social security means no threat to the obtained values while it includes no threat of the values being attacked in terms of the subjective dimension of social security (O'Neill, 2002). Dependence and substance use disorder are among the main challenges for most countries, including Iran, which hurts economic growth. It makes the realization of sustainable development impossible, brings about several social consequences and family turmoil, and imposes a very high load on the healthcare system. Therefore, the necessity of taking multilateral, inclusive, and decisive measures to fight against this social-health problem is taken into consideration in international documents and rules of many countries, including Iran (World Drug Report, 2010).

The theories that explain the causes of drug abuse have considered it via biological, psychological or sociological approaches. From the biological perspective, individuals are physiologically predisposed to addiction. It Jarvik's words, some people are physiologically so talented that they may take a higher pleasure in drug abuse and addiction. In other words, the central nervous system that mainly has been composed of the brain and spinal cord processes drugs by neurotransmitters in such a way that a very unique enjoyable experience is produced for the individual (Jarvik, 1990). From the psychological point of view that, it is believed that people with anxiety and low self-esteem turn to narcotic drugs in order to relax, gain confidence, and get rid of stress. Dependent people become infected with drugs more than others (Mooney, Knox & Schacht, 1997).
This theory places emphasis on positive reinforcement and negative attenuators of substance abuse. Positive reinforcement occurs when substance abuse leads to pleasant experiences such as emotion, joy, and peer approval. Negative attenuator occur when drug abuse ends up in the incidence of undesirable experiences such as pain, anxiety, boredom, and loneliness (Goode, 1990). From the sociological perspective, it is believes that socio-cultural structure is important in this matter. From the perspective of structural functionalism, people's tendency to these drugs increases when social norms are weakened. As the society becomes more complex and social changes occur faster, social values and norms will also become more ambiguous and it leads to anomie. Normative incompatibility is among the important factors contributing to the weakening of norms. This is so because a structural discrepancy occurs because of the warn issued by health officials about the risks and dangers of drugs on the one hand and the massive advertising of drug sellers and producers. Thus, people are encouraged to the use of these drugs. Anomie and individual anomaly are among the other factors that provide a suitable context for the encouragement of people to substance. The disintegration of family structures due to parental divorce, separation from friends because of displacement, and other similar factors make people more vulnerable to drugs. The weakening of collective consensus on accepted social norms are considered among the most important factors effective in the emergence of tendency to these drugs.

The current study is an attempt to sociologically explore the social factors affecting the tendency to addiction and its relationship with social insecurity. In the following, the contribution of each of the social factors that leads to social insecurity is determined using Group Method of Data Handling (hereafter referred to as GMDH). Finally, some applied solutions are presented regarding addiction.

Method

Population, sample and sampling method

A descriptive analytical research method was employed for the conduct of this study. The required data have been collected based on valid domestic reports and publications (including the Statistical Center of Iran, Drug Control Headquarters, and Law Enforcement Force). The statistical population of this study consists of all the country provinces in years from 1993 to 2013. The analytical model of data processing was conducted by the software package of neural networks, GMDH. In this method, the existing data enter the software as input data after being converted into weights. After the passage of some stages, the relationship between research indices and tendency to addiction as well as the relationship between tendency to addiction and social insecurity will be obtained. At the end, the contribution of each of the indices to social insecurity is estimated. It should be noted that the raw scores were converted into standard
scores (Z) to create variables because the units of measures for some variables were not the same. Finally, standard data were combined together and created the in variables mentioned this research. The variables and indexes under study were as follows: 1) Family: This is one of the important social institutions whose importance and various roles have received the attention of religious scholars, experts in education, sociologists, and psychologists. In terms of "the relationship between family distress and substance use disorder", Farrow & Brissing (1990) carried out a study on 343 adolescents. The results of that study indicated that who consumed alcohol and drugs excessively often had families with distress. 2) Neighborhood: Urban area is defined as a part of city that has functional edges or spatial edges with identity and the combination of small-scaled functions. An urban area usually consists of more than one neighboring units (Gaffron, Huismans & Skala, 2005). Neighborhood is a physical and social unit with social organizations that are bigger than household units and smaller than a city (Kurpat, 1985). Lack of religious and moral values, the prevalence of violence and wrongdoing, existence of false jobs, and weakness of the solidarity among locals, and marginalization are among the factors related to the residential location that can be lead to one’s tendency to drugs (Eslamdoost, 2010). 3) Friends and Peers: One of the most important factors in the development and growth of human personality is shaped in adolescence. According to Morris Debs, the friendships at this age lead adolescents to gain some experiences that are effective in the development of their personalities. Friends, associates, and generally speaking peers in younger ages play an important role in individuals’ proneness to addiction. Farjad (1998) conducted a study in this area and found that 63% of the sample fad announced the initiation of addiction as a result of their friends’ recommendation. The same proportion has also been found in other studies (Farjad, 1998). 4) Anomic situation: It refers to the weaknesses of norms in supervision over social behaviors. In fact, anomic situation refers to a situation wherein the monitoring of society over individuals’ behaviors and norms is weakened or eliminated and the intensity of the entrance of normative supervisors into society will be reduced. 5) Access to drugs: It refers to the frequency and ease of access to drugs and the index of total rate of drug seizures (including opium, heroin, hashish, morphine and other drug seizures) is used to measure it. 6) Industrialization: It refers to the equipment of a city or a region from the industrial point of view. At the national level, this means to traverse the stage of agricultural activities up to the emergence of a major industrial process. In addition, access to industrial activities refers to the total techniques and items that make use of raw materials in order to adapt to human needs. The number of large industrial workshops has been used as an index for the measurement of industrialization level. 7) Unemployment: People who are not employed but are able to work are considered as unemployed. In order to measure this concept, the percentage of the unemployed people among the active population is used.
In this study, the neural network algorithm, i.e. GMDH has been used. When standard regressions with multiplication from did not come to fruition due to the complexity of calculations and linear dependency, Ivakhnenko (1966) introduced a method to build a higher order polynomial, namely GMDH algorithm or data organization method. This broad approach is an ideal method for complex systems with uncertain structures where the analyst is interested in perceiving the relationship between input and output variables with high degrees. Ivakhnenko’s algorithm is an exploratory method that extracts knowledge from the nature data and it is not based on a theoretical constant basis like regression analysis. GMDH is a statistical heuristic network technology that results from cybernetic research, including self-organizing systems, information theory, and computer science control. This algorithm is not a classical statistical modeling approach, but it is an orderly process to overcome the statistical weaknesses and pitfalls of neural networks.

Today, there are some techniques based on limited assumptions and parametric analysis that have been created in computer and statistical sciences. These techniques are referred to as numerical analyses. The construction of some models for complex systems with regressions of high degrees is what introduces GMDH algorithm as a heuristic method these days. It is noteworthy that this method has some advantages over classic modeling. Professor Ivakhnenko believes that this algorithm is a self-organizing method that has applications based on data assessment for complex modeling by using an external criterion (Ivakhnenko, 1971). The variables that affect this process can be used as input variables.

Input variables, the number of layers and neurons existing in the hidden layers, and the structure of the model are determined automatically. This process is accomplished based on the minimization effect of the external criteria during the completion process. This algorithm has several applications in complex system modeling and multivariable process prediction. The mathematical basis of GMDH algorithm is according to the decomposition of Volterra functional series to bivariate quadratic polynomials (Ivakhnenko, 1971).

\[ Y = G(X_i, X_j) = a_0 + a_ix_i + a_2x_j + a_3x_i^2 + a_4x_j^2 + a_5x_ix_j \]

GMDH neural network can predict output value of \( Y \) for each input vector of \( X \).

**Results**

The relationship of predictor variables with tendency to addiction, as well as with social security is presented in the table below.
Table 1: Social factors affecting addiction tendency and their relationship with social insecurity

<table>
<thead>
<tr>
<th>Social factors</th>
<th>Cronbach’s alpha (percentage)</th>
<th>$R^2$ (percentage)</th>
<th>$R$ correlation with addiction tendency</th>
<th>$R$ correlation with social insecurity</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family (X₁)</td>
<td>78.4</td>
<td>66</td>
<td>.81</td>
<td>.74</td>
<td>.0005</td>
</tr>
<tr>
<td>Neighborhood (X₂)</td>
<td>76.3</td>
<td>59</td>
<td>.77</td>
<td>.67</td>
<td>.0005</td>
</tr>
<tr>
<td>Friends and peers (X₃)</td>
<td>76.8</td>
<td>72</td>
<td>.85</td>
<td>.79</td>
<td>.0005</td>
</tr>
<tr>
<td>Anomic situation (X₄)</td>
<td>75.3</td>
<td>62</td>
<td>.79</td>
<td>.71</td>
<td>.0005</td>
</tr>
<tr>
<td>Access to drugs (X₅)</td>
<td>80.2</td>
<td>76</td>
<td>.87</td>
<td>.81</td>
<td>.0005</td>
</tr>
<tr>
<td>Industrialization (X₆)</td>
<td>75.8</td>
<td>71</td>
<td>.84</td>
<td>.73</td>
<td>.0005</td>
</tr>
<tr>
<td>Unemployment (X₇)</td>
<td>81.4</td>
<td>78</td>
<td>.88</td>
<td>.78</td>
<td>.0005</td>
</tr>
<tr>
<td>Other drugs (X₈)</td>
<td>85.9</td>
<td>84</td>
<td>.91</td>
<td>.87</td>
<td>.0005</td>
</tr>
</tbody>
</table>

In order to demonstrate the ability of GMDH neural networks in estimating the degree of social insecurity, the data were converted into standard scales and were then divided into training and testing tests. The training set, including 478 pairs of input and output data, was used to train the neural network model. The testing, including 378 samples of unforeseen input-output data, such as training set, was solely used for testing purposes to demonstrate the predicting ability of GMDH neural networks during the training process. Two hidden layers were considered for each model. For the genetic design of neural networks, an independent 100-item population with crossover probability of .9, mutation probability of .1, and with 300 generations was used. To demonstrate the predictive performance of the neural network model in comparison with actual data, 100 data rows (input/output) were selected from the training set (Jamali, Ghamati, Ahmadi & Narimanzadeh, 2013). Some objective functions were used to determine the accuracy of the model as presented in the table below. Four criteria, namely correlation coefficient ($R^2$), mean absolute deviation (MAD), root mean square error (RMSE), and mean square error (MSE) have been used to verify the proposed model.

Table 2: Statistical information in relation to the values of social insecurity predicted by the neural network model

<table>
<thead>
<tr>
<th>Type</th>
<th>$R^2$</th>
<th>MSE</th>
<th>MAD</th>
<th>RMSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>.94</td>
<td>.000063</td>
<td>.003</td>
<td>.008</td>
</tr>
<tr>
<td>Testing</td>
<td>.95</td>
<td>.00022</td>
<td>.01</td>
<td>.015</td>
</tr>
</tbody>
</table>
The effect of each of the analytical model’s variables on social insecurity is presented in the following graph.

**Fig. 1: Effect of each of the analytical model’s variables on social insecurity**

As it is seen from the graph, the most important predictors of social insecurity are other factors, anomic situation, industrialization, family, friends and peers, access to drugs, unemployment, and neighborhood, respectively. From the results, it can be concluded that 63% of the factors that cause social insecurity in Iran is accounted for by other drugs (X8) and about 37% of it is explained by the next seven sub-factors.

**Discussion and Conclusion**

In this study, social factors affecting addiction tendency and their relationship with social insecurity were examined. The obtained results showed that social factors, such as family, anomic situation, etc. are effective in people’s tendency to addiction and accordingly in social insecurity. This finding is in line with the results obtained by Shohreh (2009), Delavar, et al. (2009), Bagheri, et al. (2010), Farrow & Brissing (1990), Nurco (1998), and Sussman (2009).

There is a significant relationship between the type of relations among family members and addiction tendency. Cronbach's alpha indicates that these variables are proper to measure the tendency. Moreover, the type of relations among family members is highly correlated with social security in society. This factor psychologically creates unfavorable conditions for young people in the family in such a way that one takes refuge in drugs or alcohol to get rid of these pressures and to find a sense of relative calm and relief. As a result, vandalism as a damaging problem of state and public properties is formed and kills the comfort and peace of society. Then, it threatens social security. Thus, the reflection of problems within the family will involve all the society and will make the public be prone to the threats of disorder and insecurity.
Structure of neighborhood has a significant positive correlation with tendency to addiction. This tendency has also a high correlation with social security. Bad friends are the beginning of deviation for each teenager. In this context, teenagers seek a pattern that can both help them and approve of them. In this way, teenagers want to find their identity. If adolescents fall into the trap of bad friends, they will readily accept the friends’ offer because they want to show they are great. Therefore, conditions for becoming addicted to drugs will be easily provided and a future full of darkness will be ahead of them. According to these findings, bad friends and peers have a strong influence on tendency to addiction. This tendency is highly correlated with social insecurity. Authorities should not neglect the importance of proper patterns for finding friends, which is one of the most important duties of family.

Anomic state has also a significant relationship with tendency to addiction and this tendency is highly correlated with social insecurity. In this regard, one can argue that when the essence of social order is broken down, the strength of social supervision over individual tendencies vanishes and people in the society are left alone without any support. In this situation, personal wishes of the individual are no longer regulated with other joint norms and, thereby, people may seem bereft of moral guidance, and anyone may seek only personal goals. In anomic situation, society loses its influence on guiding human behavior (Deflem, 1989). To realize this point, one just needs to compare large cities with small ones. In small cities, everyone who wants to go beyond people's current habits faces intense opposition at times. In contrast, in large cities, one is free from public constraints (Durkheim, 1990).

Access to drugs is significantly associated with addiction tendency. Moreover, this tendency is also highly correlated with social insecurity. The incidence of drug-related crime can be accounted for by the structure of illegal opportunities. This means that people have more opportunities to commit drug-related offenses in areas where there is greater ease in accessing drugs. This is so because some opportunities are provided for people to commit crimes in such areas and, thereby, social insecurity appears.

Industrialization is also highly correlated with addiction tendency and social insecurity. Modernization processes are not without consequences in societies and may cause a chasm between new behaviors and supportive values in a vast portion of the community. Unemployment is also of high importance in relation to addiction tendency and social insecurity. Problems related to loss of mobility, such as work-related problems increase the risk of drug-related offenses. Unemployment is a population variable that can also be attributed to anomie because unemployment can lead to rupture of the social roles and relations.

Other drugs (X8) include: relevant programs in the media, mass plantation and mass production of drugs in Afghanistan, the country’s sharing vast borders with Pakistan and Afghanistan, strength and control of the country’s eastern borders, international and regional trafficking activities, the booming market of drugs in
Europe, America and Africa, etc. All of these factors together make the highest contribution to addiction tendency and social insecurity. These issues lead to political, international insecurity, and ultimately devastation of national and international image. Addiction not only results in the loss of material assets but also leads to reduced longevity and illness among the humans who can turn the wheels of the economy. Sick and addicted people not only endanger their own health but also endanger public health. The lack of public health is equal to the pollution of the environment, reduced energy, devastation of material and human capital, reduced per capita and gross national product, an increase in unemployment due to reduced capital for investment and job creation, social insecurity, loss of credibility and international prestige of the country. Therefore, a sociological analysis can find that addiction underlies social insecurity and the pathway for the destruction of society in all aspects of social, political, cultural, and economic domains although it seems that a person becomes addicted.

In general, it can be inferred from the results that the most important predictors of social insecurity are other factors, anomic situation, industrialization, family, friends and peers, access to drugs, unemployment, and neighborhood, respectively. In fact, the impact degree of each factor is presented in Figure 1. In fact, almost 63% of the factors that cause social insecurity in Iran is accounted for by other drugs (X8) that makes a great contribution in this area. This factor consists of extensive cultivation and production of narcotics in Afghanistan and the great extent of the country's border with Afghanistan, control of the eastern border of the country, the booming market of drugs in Europe, America and Africa, profitability of drug trafficking, and drug overflow in the country as a result of its transit through the territory of Iran. According to the findings of this study, the following suggestions are made for the increase of the level of social security and avoidance of addiction tendency.

Cultivation and institutionalization of using psychological and sociological counseling among people and families, especially young people, warning parents about how to interact with each other and to solve life's problems far away from the eyes of their teenage children through training programs that police presents through the announcement of public calls. Provision of public training to young people through the mass media to familiarize such individuals to the issue of social security and its associated factors and components. For parents’ participation in these public gatherings, it is possible to take measures through frequent radio and television advertisements on the necessity of their presence in such gatherings.

Students should be assessed and analyzed at training centers according to their classes and their social status. In fact, each group of people should be measured based on its own culture rather than the culture of higher class. Another suggestion is the holding of classes for teens on how to find friends through police force participation, education office, and mass media in such a way that all students across the country can have the opportunity to use this program.
Provision of public education through the mass media to make young people familiar with the importance of social security and its associated factors and components is also of paramount significance.

In addition, planning and attempt to resolve the unemployment problem, including increasing the level of knowledge and skills will be of great assistance. Provision of work areas for youth is very important in that young people will stay in their hometown and forget about the purposeless migration to other cities, especially large cities. It is also helpful to provide the conditions for timely marriage of young people and helping them in this way, such as student marriages and the like to strengthen social trust components in the society. In addition, more attention to peasants and increase of job opportunities and facilities for them can reduce the tendency for migration to urban areas. Along all these items, increased cultural and religious training is also necessary. With the promotion of religious and ideological issues, it is possible to clarify the ugly image of tendency to addiction more than ever so that people will not try to use drugs.

The limitations of the current research are as follows: lack of access to new related sources of data and statistics pertaining to recent years, and lack of financial support on part of organizations because of the savings in time, cost, and labor. On the other hand, this study was limited in terms of validity, especially internal validity since religious attitudes and beliefs of people during the study period were undergoing changes. Since the early years during the conduct of this study coincides with the first decade of the Islamic Revolution, people have naturally had strong religious beliefs and spirits given the prevailing conditions of war and revolution. This can cause a huge impact on the reduction of crime rates and addiction tendency and this morale may have been undermined in later years. Therefore, religious and cultural beliefs is an influential factor on the incidence of offenses and crimes. Accordingly, religious and cultural beliefs have been assumed constant in this study. Another validity limitation of the present study was the absence of a variable for the determination of the intensity and weakness of the disciplinary and judicial measures against criminals that can be effective in the statistics and figures related to drug discovery. For example, if disciplinary force and judicial authorities have dealt with drug traffickers more severely due to various reasons, drug trafficking statistics registered in judicial systems will naturally experience an increase; otherwise, the statistics may be reduced. Due to lack of suitable criteria during these years that could show how the judiciary system and the police have dealt with the issues, the index of the number of closed cases in the public courts was used that may not be a suitable criterion. Therefore, if the data used in the next studies are cross-sectional, it will be possible to show the effect of this variable on drug trafficking to some extent by using other indexes such as proportion of funds allocated to each province's police force.
References


