

Abstract

Objective: The present study aims to measure the level of maturity of citizen's knowledge behavior in the city of Isfahan in the process of the socialization of fight against drugs.

Method: This research is descriptive and a survey type wherein a researcher-constructed questionnaire was used to collect data. In order to design the questionnaire, the existing opinions and viewpoints were reviewed. All intended dimensions, components, and indicators were extracted and Delphi technique was used to prepare the initial checklist to be distributed among the experts for determining the degree of fitness and importance of the indicators. As a result of the adjustment and determination of the content validity and reliability as well as the construct validity of the instrument through factor analysis approach, the output was drawn up in the form of a final questionnaire. The statistical population of the research consisted of professors and staff of universities and research centers in Isfahan. From among them, 379 individuals were selected as the research sample by simple random sampling according to the entry criteria of the research. The data were analyzed using factor analysis and structural equation modeling. **Results:** According to the research findings, individual health, entrepreneurship, individual skills were reported as the three components of citizens' knowledge behavior. In addition, among 135 behavior indicators, knowledge about social health indicators, healthy living environment, emotional health, and occupational health were recognized as the key priorities of the dimension of human capital (individual) in citizen's knowledge behavior; and social participation and participation in the transfer of urban knowledge heritage, use of abilities and competencies of others, awareness of social welfare, service awareness development of social networks (NGOs, etc.), identification of addiction tendency factors, and other social trauma were reported as the five key priority indicators of citizens' knowledge behavior in terms of human capital (collective). **Conclusion:** The findings of this research showed that citizens of Isfahan are placed at the second level of maturity of citizenship knowledge behavior.

Keywords: citizens' knowledge behavior, socialization of fight against drugs

Citizens' Knowledge Behavior: Role of Learning Competencies of Citizen's Knowledge Behavior in the Socialization of Fight against Narcotics

Soltani, I., Moshref Javadi, M., Barazi, A.

Soltani, I.

Assistant Professor, Faculty of Management, Islamic Azad University, Isfahan Branch, Isfahan, Iran

Moshref Javadi, M.

Assistant Professor, Faculty of Management, Islamic Azad University, Isfahan Branch, Isfahan, Iran

Barazi, A.

Ph.D. in Human Resources Management, Shakhes Pajouh Research Institute, E-mail: abarazi@yahoo.com



**Research on Addiction
Quarterly Journal of Drug
Abuse**

Presidency of the I. R. of Iran
Drug Control Headquarters
Department for Research and Education

Vol. 12, No. 46, Summer 2018

<http://www.etiadpajohi.ir/>

Introduction

Addiction is one of the most important social, economic, and health problems whose consequences are considered as a serious threat to the human society. It can cause social stagnation in various areas. Solving the problems of addiction requires a change in the methods of systematic thinking, because the previous methods of thinking about this issue will no longer work, and perhaps the type of retrospective consideration at this issue intensifies its complexity. In the current era, one of the most effective ways to address future issues is to have a knowledge-based approach to solving problems. Despite being rooted in the ancient thought and literature, it is a modern approach that has recently attracted a great deal of attention in the concepts of social, economic, cultural, and political development. Moreover, it helped the emergence of concepts such as knowledge-based city, knowledge corridors, citizen's knowledge, and knowledge behavior.

Citizens' knowledge behavior is one of the concepts of urban knowledge development that has recently attracted the serious attention of some of the experts in the fields of social sciences and urban development. If citizens of a city are knowledge-based, they can compete in the global economy (Ergazakis, & Psarras, 2004). As members of the community improve their performance, the social solidarity increase (Gonzales, Wilhelmy, Cavazos, & Martinez, 2012), and the rate and the prevalence of crime are also reduced, and the distribution of wealth in the community will be improved (Garcia and Martinez, 2015). Undoubtedly, there is a strong relationship between the citizen and the city, and it can be acknowledged that there is a stronger relationship between the urban development and human capital. The realization of growth and development will not be possible without paying attention to the knowledge development of citizens as human capital of the city. The reason is that the citizens' knowledge behavior serves as the stimulant for the movement of the city's social status and is considered as the citizen's desirable behavior. Citizen's knowledge behavior leads to their participation in all political, economic, social, and cultural programs (Sutton, 2008). These behaviors are in fact spontaneous, cooperative, and supportive behaviors and will result in citizens' satisfaction because of their social performance of responsibility (Martinez, 2006). Therefore, the concept of "citizens' knowledge" has been considered as one of the key concepts in the knowledge-based development and has gradually entered into the literature on the knowledge development of the city. Paying attention to this concept is based on a systematic view of the social-communicational capital which stems from the third generation of knowledge management research. In comparison to the previous generations of knowledge management, the third generation is significantly more prominent due to its systematic analysis and the analysis of social transformations. This generation of knowledge management emphasizes education as the main factor in distinguishing the knowledge society from the information society (Garcia and Martinez, 2013).

In defining the citizen's knowledge, Martinez (2006) first defined the citizen's knowledge as a factor of constructing and developing communication. He identifies it as a kind of citizen leadership with a set of prominent skills (in which) the created values are exchanged, citizens are able to manage their knowledge, and participate simultaneously in the management of their city's knowledge. Ergazakis and Psarras (2004) also consider the strong and dynamic innovation, sustainable economics, better education services, the existence of citizen's knowledge, and such factors as the advantages of a knowledge-based city. In Sutton's (2008) view, the knowledge-based citizen is recognized by the culture of knowledge-sharing, and the satisfaction with participation in continuing education is the main key to this challenge. Smith and McKeen (2003) also classify the citizens' knowledge behavior into three levels of knowledge sharing behavior, individual knowledge management, and continuous (lifelong learning) learning. Hospers (2003), in the list of characteristics of citizenship behaviors, puts emphasis on the importance of having a citizen's knowledge. He believes that a citizen's knowledge is a researcher, precise, and resilient person who looks for different ways in order to be able to find different solutions for the problems, to offer different options in dealing with a problem, and to be creative in seeking new ways for getting things done. Longworth (2003) argues that the development of leadership techniques and skills is necessary for citizen's knowledge. Martinez (2006) considers such issues as "having civil responsibility capabilities, tolerance, solidarity, and self-motivation as the main characteristics of the citizen's knowledge. Carrilo (2006) also emphasizes on citizens' having digital knowledge and ability for handling the knowledge of the city. Penco (2011) considers a person with citizen's knowledge as someone who is familiar with technology, recognizes the talents, and is tolerant. This is in fact what Florida (2007) points to in terms of the economic development of the regions / cities which have been affected by three major factors of technology, talent, tolerance, and endurance. Garcia and Martinez (2013) and Gonzales, Wilhelmy, Cavazos, and Martinez (2012) have also introduced citizens' participation as a key factor for social change and transformation. They believe that citizens' participation affects on the government decisions and community development.

A glance at the literature review shows that in line with the advent of concepts of socialization of fight against drugs and psychedelics, and its long-term goals as a new thinking in dealing with it, the following steps are necessary: before the compilation and implementation of programs and policies pertaining to the socialization of fight against drugs, the level of maturity of citizen's knowledge behavior should be measured in the first step and then the citizens' knowledge behavior as a precondition for their participation in fighting drug activities should be taught according to each level. Although Isfahan is in the third place in terms of the indicators of urban development and the characteristics of a creative city (Abbasiyan & Daliri, 2012) regarding the indicators of citizens' knowledge behavior (Barazi, 2016), and is in the second rank in terms of social

development (Firoozabadi, Hosseini, & Ghassemi, 2011) among the 31 provinces of the country, it is at a lower level regarding the social capital.

Considering the necessity of citizens' participation in addiction prevention activities, and considering that Isfahan had a medium rank in the citizens' participation in the preventative activities, and also due to the ease of access to the studied statistical population, Isfahan was selected for this study. This study explored the level of maturity of citizens' knowledge behavior in Isfahan by investigating the views and theories in the area of citizens' knowledge behavior and providing a list of knowledge behavior. Some of the characteristics of the citizens' knowledge behavior from the perspective of researchers are presented in Table 1.

Table 1: The prominent characteristics of the citizen's knowledge from the researchers' viewpoint

<i>Variables</i>	<i>Researchers</i>
Awareness	(Hospers, 2003; Cory & Wilson, 2006), (Esmaili, Mirdamadi, & Hosseini, 2013; veyzi & Zarandiyani, 2012), (Rased et al., 2016)
Citizenship rights	(Schulz et al., 2016), (Ghavamifar & Beyg, 2008)
Communication	(Remy, 1980; Garcia & Martinez, 2013, 2015), (Khodarahm, Bazi, & Esmailzadeh, 2010)
Self evaluation	(Carrilo, 2010; Garcia & Martinez, 2013, 2015)
Use of technology	(Hopspers, 2003), (Taghizadeh, Zakeri, & Taghizadeh, 2012)
Knowledge sharing	(Remy, 1980; Ergazakis & Psarras, 2006; Van Winden et al., 2007; Carrilo, 2010; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Garcia & Martinez, 2013; 2015; Schulz et al., 2016), (Ghavamifar & Beyg, 2008)
Social cohesion	(Carrilo, 2010; Garcia & Martinez, 2013, 2015)
Discussion and conversation (negotiation)	(Goldberg, Pasher, & Dvir Sagi, 2006; Cory & Wilson, 2006)
Equality and justice	(Van Winden et al., 2007; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012)
Hygiene and health	(Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Garcia & Martinez, 2013, 2015) (Khalifeh, 2011; veyzi & Zarandiyani, 2012).
Tolerability	(Ergazakis & Psarras, 2006; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Yigitcanlar & Sarimin, 2012; Garcia & Martinez, 2013, 2015)
Encouraging Interests	(Remy, 1980)
Language	(Hopspers, 2003)
Critical thinking	(Khalifeh, 2011)
Variety	(Van Winden et al., 2007; Yigitcanlar & Sarimin, 2012; Garcia & Martinez, 2013, 2015)
Public space	(Garcia & Martinez, 2013, 2015)
Artistic activities	(Hopspers, 2003)
Self-motivation	(Dvir, Pasher & Goldberg, 2006)
Information literacy	(Carrilo, 2010; Schulz et al., 2016), (Ghavamifar & Beyg, 2008)
Access to information	(Remy, 1980; Van Winden et al., 2007; Garcia & Martinez, 2013, 2015)
Precision	(Hopspers, 2003)

Table 1: The prominent characteristics of the citizen's knowledge from the researchers' viewpoint

<i>Variables</i>	<i>Researchers</i>
Networking	(Ergazakis & Psarras, 2006)
Self-esteem	(Carrilo, 2010)
Optional activities	(Garcia & Martinez, 2013, 2015)
Judgment	(Remy, 1980)
Entrepreneurship	(Garcia & Martinez, 2013, 2015)
Being a researcher	(Hopspers, 2003)
Self-management	(Hopspers, 2003)
Taking responsibility	(Hopspers, 2003; Dvir, Pasher & Goldberg, 2006; Yigitcanlar & Sarimin, 2012; Schulz et al., 2016) (Khalifeh, 2011; Kharazmi, Rabbani & Amirfazli, 2014; Navabakhsh & Sabeti, 2014)
Social participation	(Remy, 1980; Ergazakis & Psarras, 2006; Yigitcanlar & Sarimin, 2012; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Garcia & Martinez, 2013; 2015; Schulz et al., 2016), (Samimiyan and Karkehabadi, 2014)
Resistance	(Hopspers, 2003)
Skill and creativity	(Remy, 1980; Hopspers, 2003; Ergazakis & Psarras, 2006; Garcia & Martinez, 2013; Schulz et al., 2016) (Khalifeh, 2011), (Kharazmi, Rabbani & Amirfazli, 2014).
Solidarity	(Dvir, Pasher, & Goldberg, 2006; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Yigitcanlar & Sarimin, 2012; Garcia & Martinez, 2013, 2015)
Empathy	(Hopspers, 2003)
Cooperation	(Garcia & Martinez, 2013, 2015)
Identity	(Schulz et al., 2016)
Continuous learning and education	(Hopspers, 2003; Gonzales, Wilhelmy, Cavazos, & Martinez, 2012; Garcia & Martinez, 2013), (Navabakhsh & Sabeti, 2015; Kharazmi, Rabbani & Amirfazli, 2014; Samimiyan & Karkehabadi, 2014; Khodarahm, Bazi, & Esmaeilzadeh, 2010)

In order to obtain the list of characteristics and competencies of the citizen's knowledge behavior, it is necessary to discuss the contents of the patterns pertaining to the qualifications and competencies of the citizens' knowledge in the first step. Then, the introductory list should be presented. The categories mentioned below are the basis for a list of the citizens' characteristics in the next discussion of this study. These categories are taken directly from the competencies and job qualifications. The Cinterfor Institute (2005) offers a classification that is taken from the studies of a Mexican Institute called the Standardization and Certification Institute (CONOCER). In this classification, three types of qualifications or talents are examined. The first type is the main competencies or the basic behavior required for each job. The second type is concerned with the general competencies and qualifications. That is, the functions that are applicable by different occupations and require a degree of education and are related to a particular activity. The third type involves the special competencies and qualifications that are related to the performance of any occupational and specialized field (Garcia & Martinez, 2015). DeSeCo (Development and Selection of Key Competences study) proposes three qualities or three essential and interrelated criteria for classifying qualifications:

independent action, the mutual and interactive use of tools, and activity in social groups. The Education for Democratic Citizen (EDC) project also categorizes the competencies and qualifications of the citizen's knowledge into three groups. The competencies that have 1- a cognitive aspect; 2- an emotional and affective aspect; and 3- are related to doing or taking action. Another category of competencies and qualifications of citizen's knowledge is the classification of "Child competencies in Columbia schools." This classification categorizes three major groups of competencies that are: competencies and qualifications for 1- peaceful life; 2- civil partnership and responsibility; 3- variety, identity, and evaluation of the differences. Each of these three groups consists of five parts of competencies and qualifications that form the basis of the citizens' knowledge of the behavior. Furthermore, the International Commission on Education also proposed a classification for the competencies of the citizen's knowledge according to which a four-dimensional "learning" foundation has been given attention for classifying competencies and qualifications of the citizens' knowledge of the behavior. These four dimensions represent concepts such as "learning for knowing and awareness, learning to do things, learning for a shared life, and learning to be" (Garcia & Martinez, 2015).

Another model in studying and classifying knowledge behavior is the capital model. This model views the city as a capital system. A capital system consists of all forms of social values, and tangible and intangible assets. Carrilo believes that there are different approaches and methods due to the different types of knowledge (subject, flow, and environment) of a city. Parameters that determine knowledge define the city from the position of the city of knowledge. Using the knowledge-based development approach, Carrilo has shown that the creation of a knowledge city's strategy involves identifying the value system that the city operates according to it, identifies major dimensions of the system (main knowledge), and transforms these dimensions into a system that makes it operational and executive (Carrillo, 2010). In order to utilize the theoretical framework of the capital system, the MAKCI (Most Admired Knowledge City) Capitalization Scheme has been used in this study. This framework is based on the knowledge economy model which includes a value-driven evaluation based on which the future city development would be possible through the combination and exchange of the existing traditional or knowledge-based capitals. In the capital system, three types of general capitals are mentioned including major capital, human capital, and instrumental capital. Each of these capitals contains two types of capital where the main dimensions of capital (8 dimensions) are mentioned in each of them. These eight dimensions of capital are: the identity capital, the intelligence capital, the financial capital, the communicational capital (relational), the human capital (the individual dimension), the human capital (the collective dimension), the instrumental capital (the material capital), and the instrumental capital (the knowledge capital).

This study is aimed at answering the question of what are the behavioral qualifications and competencies of the citizen's knowledge. This study explores the behavioral qualifications and competencies of the citizens' knowledge behavior in human capital dimensions. Given the fact that the characteristics and competencies of the citizen's knowledge were so wide in all dimensions, they were required to be categorized. To provide a classification scheme on the characteristics of the citizens' knowledge behavior, we took action based on the value system governing the knowledge-based city (the capital system). Then, the characteristics obtained from the previous studies were combined and adjusted in the form of a list. In this section, the characteristics of citizen's knowledge behavior in the human capital dimension are mentioned. In determining the level of maturity of knowledge behavior of citizens in Isfahan and answering the question of which level of knowledge maturity the citizens of Isfahan lie in terms of obtaining the qualifications and characteristics of knowledge behavior. In this regard, three levels of evaluation were employed as the criteria in this study. These triple levels are evaluated on the basis of three variables: awareness: awareness or the extent to which a person knows that has acquired a skill or a certain technique; independence: the extent to which a person is able to do something alone; and the stability and compatibility of performance or the stability and the ability to repeat the proper performance by the individual.

Table 2: Triple levels of the citizens' knowledge maturity

<i>Criteria</i>	<i>Level 1</i>	<i>Level 2</i>	<i>Level 3</i>
Awareness	Unconscious incompetence (no knowledge on lack of behavioral competence)	Conscious incompetence (awareness of lack of competence)	Competency and suitability with precise focus
Independence	The person needs help and advice to qualify.	The person is dependent on aid guidelines.	The person is independent in terms of performance.
The stability and compatibility of performance	The performance is incompatible and unstable.	The performance indicates the degree of stability and compatibility.	The performance is stable.

Method

Population, sample, and sampling method

The current study is an applied, descriptive, and survey research regarding its purpose, its method, and its type respectively. A questionnaire was employed to collect the data. To design the questionnaire and confirm the indicators and components of the research, Delphi technique was used to design the initial checklists. In the first step, based on the existing views and theories, intended dimensions, components, and indicators were extracted and presented to 35 experts, specialists, and professors in the subject area of the research. After completing and receiving the opinions, the information and comments were reviewed. The fraction and the whole views were merged, and the similar and

repetitive views were removed and the initial checklist including the dimensions, components, and indicators of the research were prepared and returned to the experts. They were requested to present their views with a score of 1 to 5 based on the fitness and the importance of each indicator. In the third step, the views were compiled and entered into the SPSS statistical software for further investigation. After reviewing the data, the final checklist was prepared and used after determining the content validity and reliability in the form of a final questionnaire (150 questions). The reliability was estimated to be 0.85 for human capital by calculating the Cronbach's Alpha. Its validity was also obtained through the construct validity. To examine and analyze the collected data, SPSS24 and LISREL8.8 software, the descriptive statistics, and the confirmatory factor analysis methods were used. The statistical population of the study consisted of the scientific manufacturing workforce of the city including the faculty members and staff of universities and research centers (such as universities of Isfahan, medical sciences, industry, Islamic Azad University, Payame Noor, and Arts University) in Isfahan. Based on the latest census results, the number of these staff and faculty members was of 23,940 people. The SPSS Sample Power software was used to estimate the sample size. The sample size was determined to be 397, considering the maximum independent variables affecting the dependent variables involved in the research regression models, the percentage error of 5%, power of 80%, and the effect size of 0.8.

Results

According to the results of this study, the estimates of factorial validity and reliability of the instrument according to the experts' opinions about the components and indices of the research showed the following results. With regard to the calculated χ^2/df , the root mean square error of approximation (RMSEA) in the proposed model, rate of GFI, AGFI, CFI, and NFI indices of this research data have a relatively suitable fitness with the factor structure of these scales. This indicated that the questions were aligned with the variables of the identity capital, intelligence capital, financial capital, both collective and individual human capital, relational capital, instrumental capital. Estimated values related to factor loads and the explained variance of the dimensions of these variables showed that the factor loads related to all capital dimensions were in a favorable situation and the correlation of capital dimensions with the indicators of those dimensions was estimated to be moderate to high. As a result, the instrument for measuring these components has factor validity. The results are presented in Table 3.

Table 3: Model fitness and reliability indices and factor loads of capital dimensions

<i>Variable</i>	<i>(χ^2/df)</i>	<i>(RMSEA)</i>	<i>(GFI)</i>	<i>(AGFI)</i>	<i>(CFI)</i>	<i>(NFI)</i>	<i>Factor load</i>	<i>R²</i>
Human capital individual dimension	3.54	0.085	0.80	0.76	0.98	0.97	0.79	0.63
Human capital collective dimension	3.42	0.081	0.89	0.85	0.98	0.98	0.78	0.62

The Components and indices related to the human capital (individual dimension) are presented in Table 4.

Table 4: Components and Indices of Human Capital (Individual dimension)

<i>Components</i>	<i>Indices</i>	
Health and personal hygiene	Q1	Awareness of physical health indicators and enjoying them
	Q2	Awareness of affective health indicators and enjoying them
	Q3	Awareness of healthy living environment indicators and enjoying them
	Q4	Awareness of social health indicators and applying them
	Q5	Awareness of occupational health indicators and applying them
	Q6	Awareness of life expectancy indicators and applying them
	Q7	Awareness of nutritional quality indicators and applying them
	Q8	Awareness of sports, nutrition, and health habits and applying them
	Q9	Familiarity with the concepts of collective action, coordination, and collaboration and applying them
Attention to public space	Q10	Awareness of the benefits of public space development
	Q11	Participation in the collective, cultural, and economic activities of your city
	Q12	Awareness of the various transportation methods and using them in an optimal way
	Q13	Awareness of the public space problems of your city and participation in solving them
	Q14	Awareness of one's city's products and services and ways to access them
	Q15	Recognizing the communication skills and using them appropriately
Development of individual skills	Q16	Recognizing teamwork skills and using them appropriately
	Q17	Recognizing the life and using them appropriately
	Q18	Having the ability to control emotions, identify, and express one's feelings
	Q19	Having the self-motivational skills and using them appropriately
	Q20	Having a minimum degree of education (Bachelor's Degree)
	Q21	The desire to develop your professional knowledge
	Q22	Mastering English (as an International Language)
	Q23	Familiarity with the existing technologies and the ability to use them
	Q24	The ability to manage the required information and documents in different fields
	Q25	Familiarity with different ways of searching information from banks and databases
	Q26	Access to the required information and communication technologies
	Q27	Sharing your knowledge and helping others to learn
	Q28	Having the benefits of equal access to facilities
	Q29	Familiarity with the epidemiology (the general management of high-risk diseases)

The first-order factor model for the dimensions and components of human capital (individual dimension) is presented in Fig. 1.

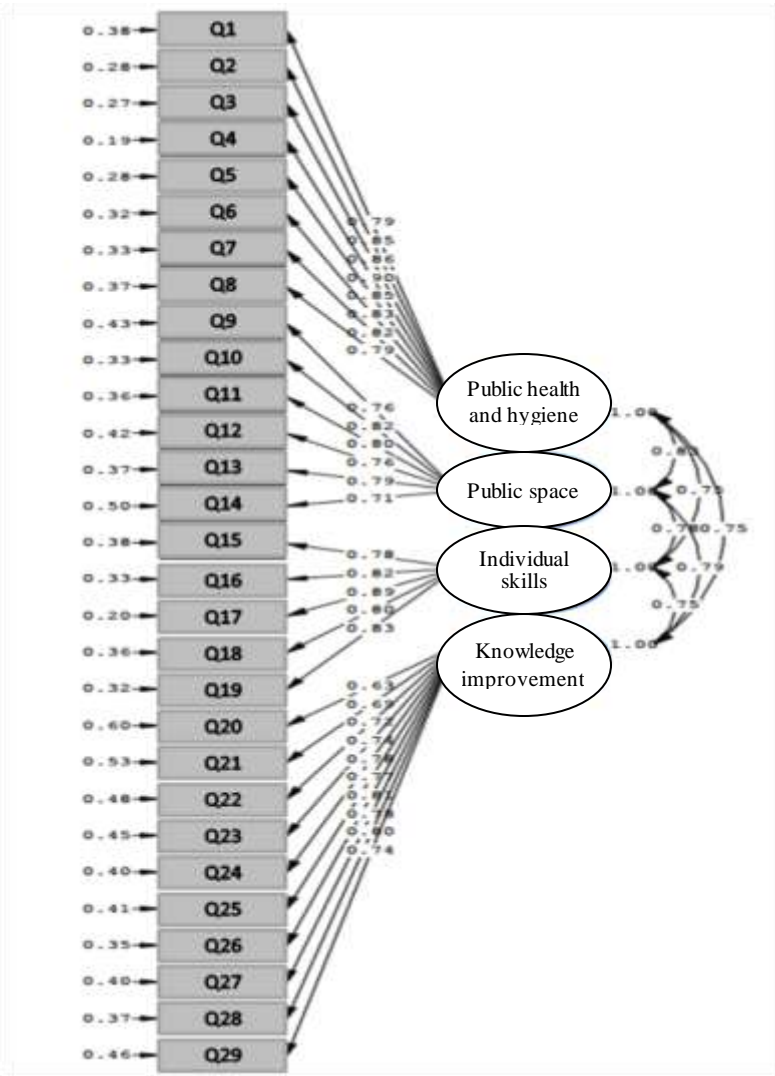


Fig. 1: First-order factor model related to the dimensions and components of human capital (individual dimension)

The components and indices related to the dimension of human capital (collective dimension) are presented in Table 5.

Table 5: Components and indices for human capital dimensions (collective dimension)

Components	Indices	
Public health and hygiene	Q1	Awareness of the general response capacity to the risks of epidemics
	Q2	Awareness of the main causes of one's city's mortality
	Q3	Familiarity with the population structure and diversity of one's city
	Q4	recognizing the causes of the tendency toward addiction and other social harms in the city
	Q5	Awareness of the factors pertaining to one's city's social well-being
	Q6	Active participation in your city's health programs
Evolutionary capacity of the city	Q7	Participation in the charity activities of your city
	Q8	Devoting part of your time to the social activities and projects
	Q9	Participating in voting in your city (at least three times)
	Q10	Participation in your city's local, family, and business communities
	Q11	Awareness of Social Networking developmental Services (Non-Governmental Organization and ...)
	Q12	Familiarity with the city's digital services of social network development
Collective culture of urban knowledge	Q13	Familiarity with your city's social networks and the ability to use them
	Q14	Ability to share your information, beliefs, and feelings with others
	Q15	Using the abilities and competencies of others
	Q16	Participating in transferring the heritage of urban knowledge to others
	Q17	Familiarity with the socio-economic environment of your city

The first-order factor model for dimensions and components of human capital (collective dimension) is presented in Fig. 2.

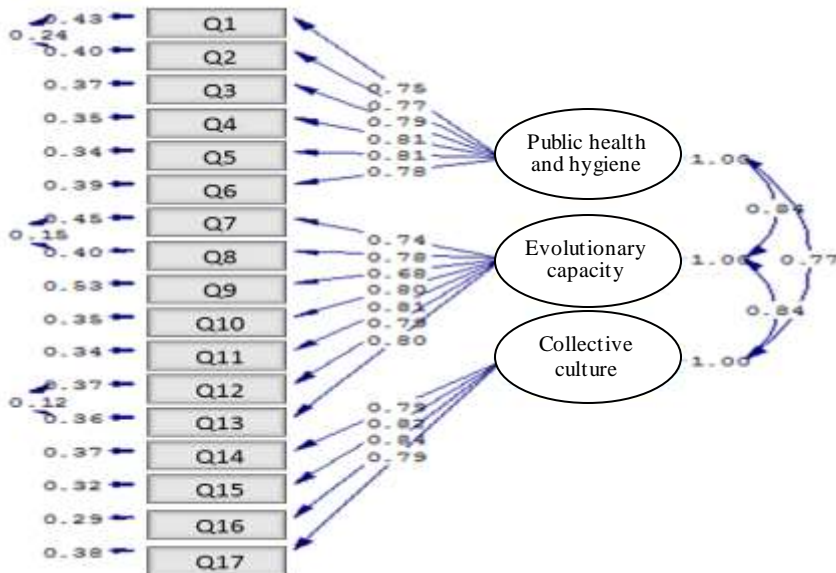


Figure 2: First-order factor model related to dimensions and components of human capital (collective dimension)

In describing the research variables for determining the key components of citizen's knowledge behavior in the human capital dimension, 19 components were examined. A total of 9 components were identified as key components in each dimension of human capital. The descriptive statistics of the variables are presented in Table 6.

Table 6: Descriptive statistics for key components of citizen's knowledge behavior in terms of the sample

<i>Components</i>	<i>Mean</i>	<i>SD</i>	<i>Components</i>	<i>Mean</i>	<i>SD</i>
Individual health and hygiene	3.67	0.86	Evolutionary Capacity	3.47	0.84
Public space	3.56	0.80	Collective culture	3.52	0.88
Individual skills	3.65	0.88	creativity and innovation	3.51	0.82
Individual knowledge	3.58	0.78	Entrepreneurship	3.66	0.93
Public health	3.51	0.89	-	-	-

In describing the research variables to determine the key indicators of the citizen's knowledge behavior, 135 indicators were studied. Among these, 30 indicators were identified as key indicators. To measure the dimension of human capital (individual dimension), the components of the individual health and hygiene with 8 indices, attention to the public space with 5 indices, the development of individual skills with 5 indices, and the improvement of individual knowledge with 10 indices were used. The most explained variance of the indexes related to the individual health component belongs to the index of awareness of social health indicators and employing them which is 81%. For the public space component, the highest coefficient of determination belonged to the indicator of awareness of the benefits and usefulness of public space development with 67% and for the component of individual skills development. The highest coefficient of determination belonged to the indicator of recognizing life skills and their proper use with 80%. For the component of individual knowledge improvement, the highest coefficient of determination belonged to the access to the required information and communication technologies with 65%, and the least belonged to the index of having a minimum degree of education with 40%.

In measuring human capital (collective dimension) the components of public health and hygiene with 6 indicators, evolutionary capacity of the city with 5 indicators, development of individual skills with 7 indicators, and collective culture of urban knowledge with 4 indicators were used. The most explained variance of the indicators of public health and hygiene belonged to the indicator of awareness of factors related to the city's social well-being and the identification of causes of the tendency toward addiction and other social harms with 66% and 65% respectively. For the city's evolutionary capacity component, the highest coefficient of determination belonged to the indicators of awareness of social network development services and participation in local, family, and business communities with 66% and 65% respectively. For the collective culture of urban knowledge component, the highest coefficient belonged to the indicator

"Participation in the transfer of the heritage of urban knowledge to others" with 71%. Regarding the priority of the key components of the individuals' knowledge behavior for the sample group in the human capital (in both individual and collective dimensions), from the highest to the lowest are: the individual public health and hygiene (3.67), entrepreneurship with the mean of 3.66, the individual skills with the mean of (3.65) were reported as 3 priorities of the citizen's knowledge behavior, and the city's evolutionary capacity with the mean of (3.47) was reported as the lowest priority component (Table 7 and 8).

Table 7: Priority of the citizens' knowledge behavior components (human capital, individual dimension) from the perspective of the sample group

<i>Components</i>	<i>Mean</i>	<i>SD</i>	<i>Components</i>	<i>Mean</i>	<i>SD</i>
Health and hygiene	3.67	0.86	The individual knowledge	3.58	0.78
The individual skill	3.65	0.88	Public space	3.56	0.80

The priority of the citizen's knowledge behavior components (human capital, the collective dimension) from the perspective of the sample group is presented in Table 8.

Table 8: Priority of the citizens' knowledge behavior components (human capital, collective dimension) from the perspective of the sample group

<i>Components</i>	<i>Mean</i>	<i>SD</i>	<i>Components</i>	<i>Mean</i>	<i>SD</i>
Entrepreneurship	3.66	0.93	creativity and innovation	3.51	0.82
Collective culture	3.52	0.88	Evolutionary Capacity	3.47	0.84
Public health	3.51	0.89	-	-	-

Out of the 135 behavioral indicators, the five key priorities of the knowledge behavior index of the citizen's of Isfahan in human capital (individual) are: awareness of social health indicators and employing them with 81%, recognizing life skills and the appropriate use of them with 80 %, awareness of the indicators of healthy living environment with 73%, awareness of affective health indicators with 72%, awareness of occupational health indices and employing them with 72%. The five key priorities of the knowledge behavior index of the citizen's of Isfahan in human capital (collective) are: social participation and participation in the transfer of the heritage of urban knowledge to others with 71%, using the abilities and competencies of others with 68%, awareness of the factors related to your city's social well-being with 66%, awareness of the social network development services (Non-Governmental Organization and ...) with 66%, recognizing the causes of the tendency toward addiction and other social harms in the city with 65 %. The priorities of the key indicators of the citizen's knowledge behavior (human capital, individual dimension) are presented in Table 9.

Table 9: The priorities of the key indicators of the citizen's knowledge behavior (human capital, individual dimension) from the perspective of the sample group

<i>Row</i>	<i>index</i>	<i>Factor loading</i>	<i>R²</i>
1	Awareness of social health indicators and applying them	0.90	0.81
2	Recognizing the life skills and using them appropriately	0.89	0.80
3	Awareness of healthy living environment indicators and enjoying them	0.86	0.73
4	Awareness of affective health indicators and enjoying them	0.85	0.72
5	Awareness of occupational health indicators and applying them	0.85	0.72
6	Awareness of life expectancy indicators and applying them	0.83	0.86
7	Having the self-motivational skills and using them appropriately	0.83	0.68
8	Awareness of nutritional quality indicators and applying them	0.82	0.67
9	Awareness of the benefits of public space development	0.82	0.67
10	Recognizing teamwork skills and using them appropriately	0.82	0.67
11	Access to the required information and communication technologies	0.81	0.65

The priorities of the key indicators of the citizen's knowledge behavior (human capital, collective dimension) are presented in Table 10.

Table 10: The priorities of the key indicators of the citizen's knowledge behavior (human capital, collective dimension) from the perspective of the sample group

<i>Row</i>	<i>Index</i>	<i>Factor loading</i>	<i>R²</i>
1	Collective participation in transferring the heritage of urban knowledge to others	0.84	0.71
2	Using the abilities and competencies of others	0.82	0.68
3	Awareness of the factors pertaining to your city's social well-being	0.81	0.66
4	Awareness of Social Networking developmental Services (Non-Governmental Organization and ...)	0.81	0.66
5	Recognizing the causes of the tendency toward addiction and other social harms in the city	0.81	0.65
6	Familiarity with the population structure and diversity of your city	0.79	0.63
7	Ability to share your information, beliefs, and feelings with others	0.79	0.63
8	Familiarity with the socio-economic environment of your city	0.79	0.62
9	Active participation in your city's health programs	0.78	0.61
10	Awareness of the main causes of one's city's mortality	0.77	0.60
11	Participating in voting in your city (at least three times)	0.68	0.47

Discussion and Conclusion

The purpose of this study was to determine the components and key indicators of the citizens' knowledge behavior in order to identify the behaviors needed to enter the socialization of fight against drug and psychedelics. In order to enter to the socialization of fight against drugs, citizens must be well-prepared. In this research, a preliminary list was prepared based on the existing theories on the knowledge-based city and the citizens' knowledge behavior. In the first stage,

the list was evaluated using Delphi method. Then, at the level of inferential analysis, the list was evaluated using statistical analysis, correlation matrix of variables, structural equation modeling approach, and factor analysis. The results revealed that the level of awareness of the Isfahan citizens of this capital is at an average level. On the other hand, the significance of the indicators and components of citizens' knowledge behavior was studied and evaluated. Human capital as an effective dimension in the city's capital was studied in the current study. Carrilo (2010) examined the human capital in both individual and collective dimensions with their components. The results of that study are consistent with those obtained in this study. The results of the present study indicate that the variable "individual health and hygiene" with the mean of 3.67 was reported as one of the key components in the human capital dimension (individual). Carrilo (2006) has studied health and hygiene as one of the community-supported features and attributes. Garcia and Martinez (2013) also considered the individual health and hygiene as an effective factor in citizens' behavior in their study. It can be concluded that the results of this study regarding the component of "individual health and hygiene" as a key component are consistent with the results obtained by Gonzales, Wilhelmy, Cavazos, and Martinez (2012), Khalifeh (2011), and Veysi and Zarandiyani (2012). "Attention to the public space" with the mean of 56.3 as another key component of the human capital dimension (individual) has been investigated in this study, which is consistent with the results of Garcia and Martinez (2013, 2015) and Veysi and Zarandiyani (2012). "Development of individual skills" with the mean of 3.65 and "individual knowledge development" with the mean of 3.58 as one of the components of the human capital dimension (individual) are investigated in this study, which is in agreement with the results of Remy (1980), Hospers (2003), Ergazakis and Psarras (2006), Garcia and Martinez (2013), Schulz et al. (2016), Khalifeh (2011) and Kharazmi, Rabbani and Amir Fazli (2014). It seems that attention to public health and hygiene can result the development and improvement of citizenship behavior as an effective factor in urban development.

The results of Kelix Berg's (2006) study on improving the city's financial capital as a result of attention to the key component of public health and hygiene confirm the results of the present study. Furthermore, the results of this study on the key component of public health and hygiene is in consistency with Garcia and Martinez (2013, 2015), Gonzales, Wilhelmy, Cavazos, and Martinez (2012), Veysi and Zarandiyani (2012), and Khalifeh (2011). "Attention to the evolutionary capacity of the city" with the mean of 3.47 and "attention to collective culture" with the mean of 3.52 have been reported as the key components evaluated by the statistical sample of research in human capital (collective dimension). These two components as factors influencing citizens' knowledge behavior and entitled as "the willingness to learn participatory behavior" by citizens are in agreement with the results of studies conducted by

Remy (1980), Ergazakis and Psarras (2006), Yigitcanlar and Sarimin (2002), Gonzales, Wilhelmy, Cavazos, and Martinez (2012), Garcia and Martinez (2013, 2015), Schulz et al. (2016), Baoud Pfeifer, John Stricker, and Scott (2011), Samimiyan and Karkehabadi (2014) and Navabakhsh and Sabeti (2014). Regarding the key indicators of citizens' knowledge behavior in the human capital dimension, the determinants of each component from the perspective of the statistical sample of the research are measured and evaluated and mentioned below. In the human capital dimension (individual), four components were evaluated. The five key indicators in the above-mentioned components from the perspective of the statistical sample were reported as follows: awareness of social health indicators and employing them with 81%, recognizing life skills and using them appropriately with 80%, awareness of the indicators of healthy living environment with 73%, awareness of emotional health indicators and enjoying them 72%, and awareness of occupational health indicators and enjoying them with 72% percent. In the human capital dimension (collective), 3 components were evaluated to determine the key indicators. According to the results, the most explained variance by the indicators was related to participation in the transfer of the urban knowledge heritage to others with 71%, using the abilities and competencies of others with 68%, awareness of factors related to the city's welfare, and the awareness of the social network development services with 66%. Therefore, these indicators can be introduced as the key indicators of this dimension of capital. These findings are consistent with those obtained by Garcia and Martinez (2013, 2015). In addition, the studies conducted by Remi (1980), Hospers (2003), Ergazakis and Psarras (2006), Garcia and Martinez (2013), Schulz et al. (2016), Khalifeh (2011), and Kharazmi, Rabbani and Amirfzali (2014) confirm the results of the present study.

According to the results obtained from this study on the qualifications and characteristics of citizenship knowledge behavior in human capital, citizens of Isfahan were evaluated at the average level. That is, the citizens of Isfahan are aware of the lack of competencies and qualifications of the citizen knowledge behavior, and need guidance for the development and of knowledge behavior competencies. Their performance in knowledge behavior represents sustainability, but it is not enough. Since Isfahan has the third rank among the 31 provinces in terms of urban development indicators and features of the innovative city, it is necessary to pay more attention to the city's human capital in order to enter the socialization of fight against narcotics. Moreover, the conditions and opportunities should be provided for citizens to be strengthened in the indicators and characteristics of the citizens' knowledge behavior and to learn about these behavioral indicators through different educational methods. The practical recommendation of this study is that the citizens' knowledge behavior should be studied based on the city's multiple urban areas. By doing so, the appropriate services would be provided based on their level of knowledge and awareness by determining the maturity levels of citizens' knowledge

behavior in different regions. Furthermore, designing an up-to-date database of the citizens' knowledge behavior of the city and its various regions can be used to formulate the developmental strategies and plans to be used by institutions such as municipalities and provincial governments, education department, the ministry of health, insurance services, etc. The findings of the study showed that the flow and rotation of knowledge are scattered in the city and some regions have little knowledge while some other have more knowledge. It seems that this has led to the development of information and knowledge gaps in different regions as a result of the access to knowledge resources and knowledge workers, which has influenced economy, culture, technology, utilization of technology, etc. It seems that paying attention to the permanent and continuous learning indicators in these areas can be considered. It is suggested that organizations and educational institutions (such as education department) try to teach the citizen's knowledge behavior at the basic levels, universities, and scientific centers through formal and informal education. The reason is that educational centers, as a large part of the city's knowledge and asset foundations, can play a significant role in training skilled and qualified staff, improving performance, implementing scientific research, and transferring knowledge to achieve the economic growth and development. In this regard, the Management and Planning Organization can play an important role by adopting training courses on citizenship behavior for staff members of organizations and also by developing educational resources in the field of teaching the citizenship behavior.

References

- Abbasiyan, E., & Daliri, H. (2012). Estimating and Ranking the Provinces of the Country in terms of Knowledge-based Economy Indicators. *Scientific Quarterly Journal of Social Welfare*, 12, (45).
- Baud, isa; pfeffer, Karin; sydenstricker, john; scott, Dianne (2011). *knowledge models in metropolitan governance networks for sustainable development: literature review*. Germany: EADI.
- Carillo, Francisco Javier (2010). *Knowledge Cities: Approaches, Experiences and Perspectives*, Oxford: Butterworth-Heinemann.
- Carrillo, F. J. (2006). *Knowledge Cities. Approaches, Experiences and Perspectives*. Burlington, MA: Butterworth-Heinemann (Elsevier).
- Dvir, R and Pasher, E (2004) Innovative engines for knowledge cities: an innovation ecology perspective. *Journal of Knowledge Management*. 8(5), 16–27.
- Dvir, R. (2006) 'Knowledge city, seen as a collage of human knowledge moments', in Carrillo, F.J. (Ed.) (2006): *Knowledge Cities. Approaches, Experiences and Perspectives*, Butterworth-Heinemann (Elsevier), Burlington, MA.
- Ergazakis, Kostas, Kostas Metaxiotis and John Psarras (2004), Towards knowledge cities: conceptual analysis and succes stories. *Journal of Knowledge Management*.(8).5 . pp., 5-15.
- Ergazakis, K, Kostas Metaxiotis and John Psarras. (2006). 'An Emerging Pattern of Succesful Knowledge Cities: Main Features' in Francisco Javier Carillo (ed.),

- Knowledge Cities: Approaches, Experiences and Perspectives*: Oxford: Butterworth-Heinemann, pp. 3-16.
- Firoozabadi, A., Hosseini, R., Ghasemi, R. (2011). Studying the Indicators and Ranking of Social Development in the Provinces of the Country and Its Relationship with Social Capital. *Scientific Quarterly Journal of Social Welfare*, (10) 37, 57-93.
- Florida, R (2005) *The Flight of the Creative Class: The New Global Competition for Talent*. London: Harper Collins.
- Friedmann, J. (1998). Planning theory revisited. *Journal of European Planning Studies*, 6(3), 245-54.
- Friedmann, J. (2005). Planning cultures in transition. In *Sanyal and Bishwapriya* (Eds.) *Comparative*
- Garcia Blanca C. and Martinez America(2013). Knowledge-based citizenship: social capitals Perspective. *proceeding of IFKAD*. Zagreb. Croati. 12-24 June.
- Garcia Blanca C. and Martinez America (2015). Knowledge-based citizenship: a capitals system Perspective. *Int. J. Knowledge-Based Development*. 6(2).pp. 152-174.
- Garcia, Blanca C. (2006). "Univercities: Innovation and Social Capital in Greater Manchester" in Carrillo, F. J. (2006). (Ed). *Knowledge Cities. Approaches, Experiences and Perspectives*. Burlington: Butterworth-Heinemann, Elsevier.
- Ghavamifar, A., & Beyg, L. (2008). Presenting the Strategic Model of Knowledge Management in the Creation and Development of Knowledge-based Cities. *6th International Management Conference. Tehran*.
- Gonzales, Octavio., Wilhelmy, Rodolfo., Cavazos, Santiago and Martinez, American (2012). In Yagitconlare, Tan; Metaxiotis, Kostas; Javier, Francisco. *Building prosperous knowledge cities: Policies, Plans and Metrics*. (pp. 111-131). UK: Edvard Elgar.
- Gonzalez, M., Alvarado, J., and Martinez, S. (2005). A compilation of resources on knowledge cities and knowledge-based development. *Journal of Knowledge Management*. 8(5), 107-127.
- Hospers, G. J. (2003). Creative cities in Europe: urban competitiveness in the knowledge economy. *Intereconomics*, 38(5), 260-269.
- Isin, N.F. and Nyers, P. (Eds.) (2014) *Routledge Handbook of Global Citizenship Studies* Routledge International, New Jersey.
- Khalifeh, Gh. (2011). Investigating the Citizenship Skills and Priorities Needed by High School Students. *First National Education Conference. Iran, Tehran*.
- Kharazmi, O., Rabbani, & Amirfzali (2014). Knowledge-based Urban Development Approach Based on Information Technology. *First National Conference on Urbanism, Urban Management and Sustainable Development. Tehran*.
- Kiyani, A., Khodarahm, B., & Esmailzadeh, A. (2010). A Study on the Role of Sustainable Development in the Knowledge-based Urban Development. *The First Sustainable Urban Development Conference. Tehran*.
- Longworth, Norman (2003). *Lifelong Learning in Action: Transforming Education in the 21st Century*. London: Routledge
- Maajedi, H. (2015). Theory of Urban Excellence. *Quarterly Journal of City Identity*. (24) 9, 17-22.
- Malakzadeh, Ali, Yigitcanlar, Tan, Bunker, Jonathan M., & Dur, Fatih (2010). *Evaluation of accessibility for knowledge based cities. In: Proceedings of The 3rd*

- Knowledge Cities World Summit : From Theory to Practice*. 16 -19. Melbourne Convention and Exhibition Centre, Melbourne, Vic.
- Martinez, A. (2006). "Knowledge Citizens: a Competence Profile" in Carrillo, F. J. (2006).(Ed).*Knowledge Cities. Approaches, Experiences and Perspectives*. Burlington, MA: Butterworth-Heinemann (Elsevier).
- Metaxiotis, K., Carrillo, J. and Yigitcanlar, T., (Eds.) (2010). *Knowledge-based development for cities and societies: an integrated multi-level approach*. Hersey, PA: Information Science Reference.
- Nabipoor, I. (2011). *City of Knowledge*. Bushehr: University of Medical Sciences.
- Navabakhsh, M., & Sabeti, M. (2015). Designing and Presenting a Model to Measure the Impact of Cultural Capital on the Dimensions of Sustainable Urban Development with an Emphasis on Clean Energies. *Journal of Social Development Studies of Iran*. (8) 1, 37-50.
- Novakowski, Nick(2010). Ottawa: the knowledge city and a labyrinth of obstacles. *GeoJournal*(2010) 75: 553–565
- Ornelas, Arreola and et. al(2003).*The Social Protection System in Health From Mexico: Potential Effects Above Financial Justice And Catastrophic household expenditure*. Knaul FM, Nigenda G (Eds.).Caleidoscopio de la Salud. De la Investigación a las Políticas y d.
- Patricia Ordóñez de Pablos, (2003) "Intellectual capital reporting in Spain: a comparative view", *Journal of Intellectual Capital*. (4): 1, pp.61-81.
- Penco, Lara(2011).Large Cities, Intangible Consumption and Knowledge Production.*Symphonya. Emerging Issues in Management* (symphonya. unimib. it). n.(2), 34-47.
- Picker, G. (1964). *Social Capital and Management*. Translated by Alvani, Mehdi, Tehran: The Office of Cultural Research, 2003.
- Raased, S., Alavi, E., Sharaf Bayani, R., Mahaniyan Khameneh, M., Falehiyan, N., & Foroozbakhsh, F. (2016). *Primary Prevention of Addiction and High-risk Behaviors*. Tehran: Iran Printing and Publishing Company.
- Remy ,Richard C. (1980) . *Handbook of Basic Citizenship Competencies: Guidelines for Comparing Materials, Assessing Instruction and Setting Goals*. UK: Assn for Supervision & Curriculum.
- Samimiyan, M., & Karkehabadi, Z. (2014). Investigating the Role of Citizen-based City in Sustainable Urban Development (Case Study: Semnan City). *First National Conference on Urbanism, Urban Management and Sustainable Development. Tehran*.
- Sarimin, Muna & Yigitcanlar, Tan (2012). Towards a comprehensive and integrated knowledge-based urban development model: status quo and directions . *International Journal of Knowledge-Based Development*. 3(2), 175-192.
- Schulz, W., Ainley, J., Fraillon, J., Losito, B., Agrusti, G.(2016). *IEA International Civic and Citizenship Education Study:Civic and Citizenship Framework*. Springer International Publishing.
- Smith, HA and McKeen, D.(2003). *Instilling a knowledge-sharing culture*.Kingston: Queens University School of Business.
- Sutton ,Melanie (2008). Knowledge citizenship for active informed citizenship. *Information citizenship*.10(4).

- Taghizadeh, M., Zakeri, A., & Taghizadeh, A. (2012). Investigating the Metropolitan Readiness for the Realization of Knowledge-based City with Emphasis on the Urban Infrastructure (Case Study: Mashhad City). *The Fourth Urban Planning and Management Conference. May 20 and 21, Mashhad.*
- The Most Admired Knowledge City: MAKCI.* (2013). Melbourn: The World Capital Institute and Teleos.
- Van Winden ,Willem ; Van den Berg ,Leo ; Pol ,Peter (2007). European Cities in the Knowledge Economy: Towards a Typology. *Urban Stud* . 44(3): 525-549.
- Veysi, H., & Zarandiyani, A. (2012). Evaluating the Citizens' Level of Knowledge and Awareness about the environment (case study: of Guilds and Business Managers in Twelfth District of Tehran Municipality). *Scientific Quarterly Journal of Environment Education and Sustainable Development. (1) 1, 35-42.*
- Yigitcanlar, Tan (2010). *Knowledgebased development of cities : a myth or reality?* Proceedings of REvive MTY forum.