

Interventions to Reduce Drug Abuse in Pars Special Economic Energy Zone

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Abstract

Background: South Pars special economic energy zone is the world's second largest gas reservoir that was established two decades ago. High incidence of social harms is observed in this region due to various problems such as drug addiction which is of high prevalence.

Objectives: The current study aimed at finding the strategies to prevent drug abuse and formulating policies in the region.

Materials and Methods: The research method was a combination of nested type (qualitative-quantitative) and analysis of participated stakeholders' views. The study was conducted from January 2014 to May 2015 in Bushehr province. Intentional sampling was used in qualitative section. Collected data were classified in 3 areas: recognition, directions, and implementation requirements.

Results: Different factors were identified affecting the prevalence of drug addiction. Various prevention and treatment interventions have been conducted in response to drug abuse in the region, though they have been often sectional, insular, inconsistent, and immeasurable in terms of impact. After the study, a combination of compulsory, facilitative, and promotional interventions was proposed to reduce drug abuse by 10% within a strategic 5-year plan. These interventions are based on 3 aspects: people, industry, and governance, which have been announced and approved based on a memorandum of understanding.

Conclusions: It is necessary to implement simultaneous national interventions as soon as possible to improve the economic, social, political, technological, international, and environmental conditions. In the current study, unlike the previous attempts, national stakeholders, including ministry of petroleum, ministry of health and medical education, interior ministry, ministry of cooperatives, labor, and social welfare, and Iran drug control headquarters have played active roles. This fact is evident in their formulation of a policy document in the region and action plan after reaching a memorandum of understanding.

Keywords: Asalouyeh, South Pars Region, Workplace, Substance-Related Disorders

1. Background

Drug addiction caused by natural or industrial drug abuse, is a kind of poisoning harmful to both individual and society (1). Drug abuse is a prevalent, universal, and complex phenomenon, which imposes heavy costs on the individual, family (2), and the government (3). According to reports of the United Nations (UN), drug abuse is the reason of about 5 million people death and 42 million affected by AIDS in the world annually (4). In the era of globalization, Iran is also confronting addiction and drug abuse problem like other countries. According to the official reports of Ministry of Health and Medical Education, currently, there are 7 million obvious and recreational drug users in Iran (5).

Drug abuse has been raised as a national problem in Iran for a long time. Its harmful consequences have broad and

worrying aspects from all social life dimensions. It also impacts the health, judicial, security, and general set-up of the community and in recent years has affected the economic field in particular. This problem is common in many working environments. In 2007, a study on drug abuse in Iran among addicts in public and private health centers, street drug users and prisons revealed that 70% of the addicts were employed. According to this report, 18.7% of addicts were skilled workers, 15.9% simple workers, 7.9% urban drivers, 7.8% shoppers, 5.9% had specialized jobs, 5.1% had informal jobs, 4.6% were suburban drivers, 3.7% had other jobs, and 3.2% were farmers (5). Prevalence of drug abuse in industrial environments, which drive important part of the country's economic wheel, is becoming a serious danger, because considerable evidence

indicates that drug abuse is accompanied by accidents, reduced work performance, increased absenteeism, and economic losses (6). Also, drug abuse is correlated to increased risk of accidents and damages and above all, drug abuse is associated with increased treatment costs and more use of social security facilities (7).

Among various industrial environments of Iran, Pars special economic energy zone (PSEEZ) is of utmost importance, because it is Iran's energy capital, first energy reservoir, and the world's second largest gas reservoir. Presence of the plenty of energy resources in PSEEZ, and its resultant labor market increased the employment rate and extensive presence of different age groups, especially young people in the region. Indeed, about 50% of the region's residents are immigrants. Increasing migration of human force, social relations between different cultures and rapid industrial development in the region, human difficulties and social damages are among the factors contributing to the prevalence of drug abuse. Drug abuse prevalence among residents of PSEEZ region involve the staff and workers in the oil industry (within the fence) and indigenous people in the 4 cities of Jam, Asalouyeh, Kangan, and Dayer (outside the fence). According to the findings of a qualitative study conducted on residents of the region, drug abuse prevalence was reported at 15% to 40%. However, a variation in the opinions of interviewees was noticed. One member of the addiction self-help groups believed that, "99 out of 100 are addicts" (8). Also, 57.3% of indigenous respondents regarded the level of drug abuse in the region high and very high (9). Reduced efficiency and production, unjustified absences over 40 days in a

year, and frequent accidents at work are the minimum consequences of addiction at workplaces (10). However, given the economic importance of PSEEZ region, the necessity of a healthy and productive workforce should be doubled.

2. Objectives

The current study aimed at finding the strategies to prevent drug abuse and designing policies in the region.

3. Materials and Methods

A nested mixed research method (qualitative-quantitative) was used, whereby the dominant method was qualitative along with a selective nested one. The research conducted from January 2014 to May 2015 in 4 districts of Bushehr Province.

Qualitative section was done as a content analysis method and quantitative method as descriptive analytical one.

3.1. Qualitative Section

Qualitative section covered 5 stages, including stakeholder analysis, interview, focus group, organizational situation analysis, and review of documents.

3.1.1. Stakeholder Analysis

This analysis was done using a commitment-effect matrix and technical steering committee. Criteria of expertise and operational experience were considered in selecting members as indicated below (Table 1).

Table 1. Sampling Specification for Interviewees

Organisation	Persons	Department
Ministries and national organizations^a		
Ministry of Petroleum	1	Director of Health section
Ministry of Health and Medical Education	1	Director of Mental Health Unit
Interior Ministry	1	Director of Social Affair
Ministry of Cooperation, Labor, and Social Welfare	1	Director of Social and Cultural affair
State of Welfare Organization	1	Director of Drug Abuse Prevention section
Iran Drug Control Headquarters	1	Director of Prevention and Education
Stakeholder groups in the region^b		
City and Village Councils in 4 districts	2	Head of Council
Oil and Gas Industry representatives	1	Head of South Pars Special Economic Energy Zone
Governors of the in 4 districts	4	Governor in Kangan, Jam, Asalouyeh, Dayer

^aSix members from 6 ministries and national organizations.

^bSeven people from 3 stakeholder groups in the region as 3 vertices of the main stakeholder triangle, including 3 representatives of people (City and Village Councils in 3 towns), 3 representatives from main companies located in the region (Oil and Gas industry representatives) and 3 governors of the towns (government representatives in the region) with at least 5 years experience in the region.

3.1.2. Interview and Focus Group

In conducting interviews, intentional sampling method was used and members of steering committee were selected as interviewees. All people got familiarized to the items of interview in a justification meeting. All Interviews were conducted by a social medicine specialist who had experiences with addiction issue in the Islamic Republic of Iran.

Overall, 13 members of the steering committee were structured-interviewed and results of the interviews were classified in 5 main interview questions.

- How is a status of addiction in PSEEZ?
- What are the factors and reasons affecting the current status?
- How do you evaluate the success of previous strategies?
- How do you evaluate opportunities, threats, strengths, and weaknesses in the management and prevention of addiction in the region?
- What strategies do you propose in the current conditions for primary prevention of addiction in the region?

The questionnaires were sent to the interviewees by e-mail and then the face-to-face interview was arranged. The average duration of each interview was about 30 minutes. All interviews were recorded with the permission of the interviewees and transcribed by a single interviewer.

Strategies studied in the current work were classified in 3 types of intervention as following:

- Promotional interventions mainly consist of informing, raising awareness, and changing attitudes.
- Facilitative interventions including providing counseling, treatment and recreational-welfare services.
- Compulsory interventions which emphasize the role of law and forcible regulations in behavior change of audience.

Following the classification of data in 3 separate areas of recognition, direction and implementation manner, data were prepared for formulation of policy document and provided to the steering committee for reforms and completion.

3.1.3. Upstream Document Review

Document review was done in order to find out whether there is adequate legal and upstream support for drug abuse prevention measures. All upstream documents were collected from top positions, parliamentary rules, legislations and regulations of executive bodies, and related agreements and MoUs. These documents were collected and analyzed through a document search in Hagh CD (11), internet websites of stakeholder organizations, and interview with steering committee members (12, 13).

3.1.4. Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

One of the technical steering committee sessions was specifically allocated to SWOT analysis. In this method,

a virtual unit is assumed in the special region with coordination council for Combating drugs at its top position, and respective secretariat is assumed as internal environment. Strengths and weaknesses of internal environment were listed in the form of structure, purpose, method of management, resources (human, information, money, and equipment) and standard processes and procedures using the above data. Threats and opportunities were determined in near and far parts, respectively. The near environment included the attitude and performance whereas the far environment included 6 major factors of political, economic, technological, social, environmental, and international macro factors.

3.2. Quantitative Section

This section was implemented as nested method within a qualitative section aiming at identifying the region and estimation of addiction prevalence. For identification of the region, geographic, demographic, and epidemiological information of PSEEZ were collected. For obtaining the prevalence, all documents were searched using appropriate keywords which included addiction OR drug abuse OR drug dependency OR substance use disorder AND Asalouyeh AND south pars economy energy zone. This process resulted in 4 articles and one MS thesis. Also, all formal and confidential reports, and evaluation reports (governmental or private) on addiction prevalence in the region were acquired and analyzed.

3.3. Ethical Considerations

Ethical issues (plagiarism, informed consent, misconduct, data fabrication, data falsification, double publication and or submission, redundancy, etc.) have been completely observed by the authors.

4. Results

Following the analysis, the collected data were classified in 3 areas of recognition, orientation, and establishment manner.

4.1. Recognition Part

Pars special economic energy zone is located in Bushehr province southeast part of Iran. This region was established in 3 zones: Pars 1, Pars 2, and Pars 3 with an area of 46,000 hectares, and a geographical scope of 4 districts of Asalouyeh, Kangan, Jam, and Dayer. In 2011, according to the Statistical Center of Iran, about 222,000 people and 40,000 households lived in Jam, Kangan, and Asalouyeh towns, 6 districts, and 13 towns which included Kam, Kangan, Asalouyeh, Riz, Anarestan, Siraf, Bonak, Bidkhoun, Akhand, Chahmobarak, Parak, Baharestan, and Nakhil Taghi as well as 9 villages. According to Table 2, labor market resulting from great energy resources in the region led 119 men to live per 100 women in 2011. To this matter, the region has the highest ratio of men to women population in Iran and so-called the most masculine province of the country.

Table 2. Geographic, Demographic, and Epidemiologic Data of Pars Special Economic Energy Zone (2011)

Index	Value
Area, hectares	30,000 (10 million)
Average annual temperature, °C	6
Annual rainfall, mm	180
Annual moisture content, %	35 to 60
Distance from Bushehr port, km	300 East
Distance from Tehran, km	1200 South
Distance from Pars gas field in the Persian Gulf, km	105
Number of towns	3
Number of districts	6
Number of cities	13
Number of villages	9
Religion	Islam (Shia and Sunni) (95%), Zoroastrian, Jewish, and Christian
Jobs of indigenous people	Fishing, agriculture, horticulture, animal husbandry, commercial marine
Important tribes	Harmi and Nasour
Main food of indigenous people	Fish, lentil soup, Lalak, and Ranginak
Agricultural chief products	Palm, citrus, and vegetables
Number of households, 2006	30189
Kangan Town	15220
Asalouyeh Town	6557
Jam Town	8412
Number of households, 2011	39415
Kangan Town + Asalouyeh Town	25667
Jam Town	13748
Total Population, 2011	222220
Kangan Town + Asalouyeh Town	170774
Jam Town	51446
Resident Population 2011	187432
Kangan Town	95113
Asalouyeh Town	54320
Jam Town	37999
Immigrant Population 2011	35379
Kangan Town + Asalouyeh Town	25330
Jam Town	10049
Sex ratio of population, %	
Male	54 (province), 67 (region)
Female	46 (province), 33 (region)
Age ratio of population, %	
Children	22
Aodlecent and young	51
Middle-aged	20.5
Old	6.5
Unemployment rate, %	8.5 (province) and 2.5 (region)
Level of education (over 6 years)	85
Number of companies	146 companies in industrial sector
Employment status of employees in industrial companies	11,000 formal employees and 16,000 informal employees
Total employees with the start-up of 20 phases	100,000
Average age of employed single workers in Asalouyeh	25 - 30 years with considerable income compared to other regions
Main companies in the region	Petrochemical Company, Gas Complex Company, Pars Oil and Gas Company

4.1.1. Addiction Prevalence and Etiological Studies in Region

Some studies were conducted in PSEEZ concerning addiction prevalence and its relevant factors. Studies on addiction epidemiology in work places in 2014 indicated that about 21% of people under study had positive addiction test results. Another study was conducted in 2010 using available official resources, and data collected from household heads. It indicated that, 21% of the samples showed an increasing addiction level as one of the major social problems in PSEEZ. This was due to industrialization in the region, which led to immigration of job seekers from other parts of Iran with different characteristics, and thus, leading to addiction prevalence in this region. Another study in 2009 showed the then prevalence of opioid use in workers as between 15% and 25%. In this study, reasons such as rapid construction, mass workers, demanding work in bad weather, population density in the camps, reduced ability due to environment control and easy access to drug were implicated for drug abuse prevalence. Other reasons cited were lack of contractors' attention to drug abusing workers, and lack of preventive and curative services. Another study in 2006 showed over 70% to be drug abusers versus 47% alternative group with contractual and contractor employment status. Over 53% of abuser group versus 12.5% of non-abuser group worked as expatriate personnel. Almost 66% of abusers had working shift for more than 12 hours, whereas in the alternative groups, it was reported as 36%. In this study, it was reported that employment in expatriate plans (3 weeks of working, 1 week of resting) contributed to a tendency toward drug abuse. A qualitative study in 2006 provided solutions for reducing social disorders and problems. According to this study, industrial development and technological progress in Asalouyeh provided grounds for its complete change from a rural society to either industrial or urban society. However, vast changes in the region resulting from industrialization process brought about great paradoxes. A review study on 10 research plans carried out in Asalouyeh region in 2005 showed that, addiction and drug sale were among the highest damages in the region causing dissatisfaction among residents.

4.1.2. Analysis of Previous Interventions

According to reviewed documents, various measures have been taken for addiction prevention in the region. Classification of these interventions is given in Box 1. Overall, 7 types of promotional interventions, 9 types of facilitative interventions, and 16 types of compulsory interventions have been done during the last decade. Analysis of these interventions and opinions of interviewed stakeholders were as follows:

"Conducted plans were often without identity and coverage, and their satisfaction is unknown due to lack of evaluation reports. These interventions belonged to spe-

cific time periods and depend on presence of the manager, and can be stopped with displacement of the manager. Some companies cared more for this issue compared to

others and took it seriously. Thus, facilitative and promotional services did not have balanced distribution among major companies”.

Box 1. Interventions Taken for Addiction Prevention in the Region During One Decade Leading to Current Study

Measures According to the Intervention Type

Promotional Interventions

1. Holding addiction prevention seminar in Asalouyeh region
2. Formation of community-based addiction prevention teams consisting of local volunteers in the districts, schools, and kindergartens
3. Distribution of brochures, posters, and installation of banners regarding the effects of psychoactive drugs
4. Holding training courses on the prevention of drug abuse for 60000 employees and workers
5. Formation of Narcotics Anonymous (NA) group with a membership of more than 80 people
6. Training life skills to employees and workers at different age levels
7. Holding training courses on addiction prevention aiming at familiarization of newly employed staff

Facilitative Intervention

1. Establishment of Social Welfare Services Complex to provide prevention services to local residents
2. Establishment of Social Pathologies and Addiction Prevention Counseling Center in the largest labor camps known as Kerman-shahan
3. Launching Drop-in Center (DIC) and mobile teams in Asalouyeh
4. Offering center on crisis intervention and its establishment in governor department and preparation of its construction
5. Treatment and rehabilitation services for addicts by NGOs under the auspices of Social Welfare Organization
6. Providing mobile services and social emergency
7. Providing facilities of sports complex, sending athletes to national competitions, holding family mountain events, pilgrimage and entertainment tours for families
8. Holding ceremonies on religious occasion, festivals, and national celebrations in the region, celebrating the working start of the new forces in Asalouyeh
9. Holding recreational and leisure programs by community-based teams

Compulsory Intervention

1. Memorandum of Understanding (MoU) for social issues management in the region between the Minister of Oil and Minister of Labor and Social Welfare
2. Public Surveys about drug situation status in the region and among workers, and relative interventions and sending reports to the relevant authorities
3. Funding projects of 14 community-based addiction prevention teams
4. Formulating plans for prevention of psychosocial trauma and drug abuse in the region
5. Approval of drug supply and demand reduction program (subject of the letter No.10/1006196 dated February 12, 2012 announced to Interior Minister and Secretary General of the Drug Control Headquarters)
6. Announcement of social Deputy of Interior Minister to reduce addiction in the region (the subject of the latter No. 8/81/32435 dated May 26, 2011)
7. Comprehensive Strategic Document on Prevention from Addiction - non-approved (provided by HSE)
8. Formation of Anti-Drug Abuse Coordinating Council
9. Action plan approved by the board of regional organization in cultural, educational, sport and recreational activities with a budget of 125,000 USD
10. Comprehensive Health Plan in special zone - under approval
11. Regular visits of residential camps in the region by the inspection team consisting of representatives of managing director, security unit, and HSE
12. Financial aids granted to Physical Education Organization in Kangan, Dayer, Jam, Asalouyeh, and Nakhil Taghi
13. Bounding contractors to obtain a certificate of no criminal record and no drug testing at the time of recruiting new forces in the region
14. Identification and destruction of places of assembly, distribution, and consumption of drugs
15. Screening tests for drug in refineries periodically by security unit of South Pars Gas Company
16. Referring 392 addicts to Narcotic anonymous society and medical centers for addiction treatment

According to interviewed individuals: “designing and implementing addiction prevention interventions in the region is not an easy task, since most of human forces are seasonal workers and can stay for a maximum of 6 months”.

4.1.3. Review of Upstream Documents

Review of upstream documents showed that article 4 in General Policies of Drug Combat notified by the Supreme Leader of Iran in 2006 emphasized some prevention ways. Comprehensive Document on Primary Prevention from Addiction was approved in 2011 and its seventh national plan provides addiction prevention services to work places.

Overall, the steering committee members believed that upstream documents adequately support drug abuse prevention measures.

4.1.4. Organizational Situation Analysis

According to the data obtained from interviews, capacities mentioned in upstream documents and opinions of steering committee members in focus group indicated that, internal and external environments are respectively in weak and threatening situations. In this case, organizational situation of addiction prevention management system was placed in defensive position. According to the steering committee, the main weakness and threat is poor coordination of stakeholder groups in the region. In other words, the 3 main groups of PSEEZ are similar to 3 vertices of triangle of people, oil and gas industry, and local governance. However, all have some disagreements with each other which lead to problems hindering any joint action.

4.2. Direction Part

The plan outlook during a 5-year period was specified based on the results in recognition part, and the summary of stakeholders' opinions:

“Ten percent reduction of addiction prevalence (including the whole process which lead to addiction such as tendency in use, experimental use, occasional use, abuse and dependence on drug) in the special zone (workers, formal employees, indigenous people) through institutionalization of cooperation in the governance sector (governance and respective organizations in Jam, Asalouyeh, Kangan, and Dayer towns) and industry sector (special zone organization) which people agreed to in the steering committee as a plan outlook”.

In order to achieve this outlook, 4 strategic goals were determined as follows:

1. Institutionalization of addiction prevention cooperation secretariat (operation monitoring) in the region, which involved developing physical space with easy access to prevent teams and people; formation of council of prevention connectors in industrial districts and areas

with participation of 3 stakeholder groups; introduction of secretariat services to the public; having specific budget row (shared with organizations or single fund), having a minimum of 50 focal points similar to establishment of prevention service package,

2. Full coverage of addiction prevention service package in all districts of 4 towns and work places of industrial sector,

3. Launching triple centers of “social health center” and “vivacity complex” in the towns and “employee helper units” in industrial centers with balanced distribution. Social health centers provide integrated psychological and social services to the audiences, including addiction prevention and treatment services (with emphasis on indigenous residents). Vivacity complexes are recreational and cultural centers and employee helper units are within the work places which provide integrated sociopsychological services which include addiction prevention and other needed packages to employees (and their family).

4. Support seeking in institutionalization of a comprehensive plan of health, and sustainable development in the region; simultaneous measures for reduction of poverty, increasing literacy, reduced unemployment in indigenous people, and social capital in the region are goals of support seeking.

In order to achieve the above goals, the following interventions were proposed (Box 2). Media were mentioned as complementary strategy for addiction prevention.

4.3. Implementation Part

According to interviewed people in steering committee, though there have been various interventions for addiction prevention, there was no unit responsible for monitoring and assessing interventions. Thus, the first step in ensuring establishment of the plan was to create a secretariat with trained human forces in the region. In the next step, the secretariat would implement the following measures to guarantee implementation of triple interventions:

- Triple interventions mentioned in Box 2 should be divided among 3 vertices of region's stakeholders, and its MoU to be signed.

- Each committed unit should introduce its responsibility so that it can plan for the implementation trend pursued through formation of monitoring sessions.

- Strategic plan is funded following the approval of Iran Drug Control Headquarters, and Head of Pars Special Economic Energy Zone is assigned as the responsible person for the plan implementation.

- Successful units in the project implementation should be ranked and rewarded annually.

- Plan success indexes are defined at several levels:

- a) Final Impact Level: Drug abuse prevalence survey is done at first and fifth year of plan implementation.

- b) Outcome Level, which includes the following items:

- Coverage extent of educational and preventive programs

Box 2. Necessary Interventions to Achieve Strategic Goals and Outlook of Addiction Prevention Plan in Pars Special Economic Energy Zone

Projects According to the Plan

Promotional Plans

- Continuous empowerment of managers regarding the requirements of prevention, treatment, and harm reduction of drug abuse
- Training programs to increase knowledge and attitude of all residents (citizens, workers, and employees) regarding the causes, consequences, and approaches to prevention and treatment
- Social marketing for the enjoyment of services developed in the region and reduction of social stigma
- Holding courses on life skills, parenting, family life, expatriate life, and mental health principles for residents
- Design and implementation of media campaign (outdoor advertising, cyberspace, local TV, books, brochures, and posters and effective video)
- Creating fixed billboard in certain areas and publishing monthly messages on prevention and treatment of addiction

Facilitative Plans

- Developing comprehensive and integrated recreational, cultural, spiritual, and welfare facilities as well as introducing available facilities in 4 towns of the region
- Establishment of recreational programs for the general public, workers, and formal employees
- Developing social health counseling centers suitable with geography and population distribution in the region
- Integration of social, psychological, and spiritual counseling services in industrial work places through “employee helper” centers
- Formation of public participation home in health and licensing for shaping active groups in this field

Compulsory Plans

- Development of drug prevention plans in industrial work places, educational environments, and neighborhoods
- Coordination of Police and security forces to deal with suppliers and reduce drug supply (motivating addicts to treatment)
- Training contractors upon entry to region and inclusion of educational courses and other requirements in their conditions
- Including training courses related to the prevention and treatment of addiction in terms of promotion of staff and managers
- Seeking support for programs to reduce school dropouts and to restore the educational survivors in the region
- Seeking support for design and implementation of poverty reduction programs in the region
- Design and operation of Health and Sustainable Development Council of region (to engage and align the three main groups in the region)

for people, employees, and managers defined for all educational and preventive programs in the region through reliable pretest and posttest,

- Literacy of addiction prevention is specified in the total population by a survey,
- Developing consultation, welfare, and recreational centers,
- Satisfaction of residents with consideration of addiction problem by authorities, which is a success determinant for the outlook plan.

c) Output, Process and Input Level: using recording system at this level, performance of units and success of annual projects, calculation of financial resources, and satisfaction of triple groups with cooperation being monitored.

5. Discussion

According to the quantitative results of the study, prevalence of addiction among workers in the region was higher than national addiction prevalence estimation at work places. Study findings in different countries suggested a high prevalence of drug abuse in workers’ population.

A survey on drug abuse in US labor-force estimated that nearly 70% of consumers of illegal drugs were employed by governmental organizations, departments and public and private sector industries. Among all accidents in work places, 20% to 35% involve employees affected by drug abuse which damage themselves and colleagues (11). According to a study conducted on 1200 employees from different work places in Illinois, USA, drug abuse prevalence was reported lowest in service jobs (27%) and highest in factories (46%) (14). Findings from 2001 National Drug Strategy Household Survey in Australia, indicated that about 8% of the workers had weekly short-term effects of alcohol use, 17% of workers had monthly short-term effects due to alcohol use and 11% of workers had long-term effects. Prevalence of alcohol use and its harms was higher in non-technical workers compared to technical and specialized workers (15). In Brazil, urine samples of 12700 workers from 5 different geographical areas of the country were tested. About 14% showed positive amphetamine use, 17.7% showed positive cocaine use, 59.9% showed marijuana use and 7.7% were positive for other substances (15). A study in Asalouyeh further indicated that, over 70% of drug abusers versus 47% of alternative

group had contractual and contractor employment status. Over 53% of abuser group versus 12.5% of non-abuser group worked as expatriate personnel. Almost 66% of abusers had shift working for more than 12 hours, and 36% in the alternative group (16). This is a clear indication of hard working effect on drug abuse among employees. Also, other factors such as housing conditions in camps and dormitories, availability of drugs, and absence of a firm policy to deal with drug sale and abuse lead to exacerbation of the problem among employees (17). Employer's policies either in prohibiting or ignoring drug abuse at work places along with drug access are factors playing a role in the development of drug abuse at work place (18). Thus, measures such as strict and continuous controls on drug supply and entry into the region are useful in drug abuse prevention and treatment of abusers.

Despite the severity of the problem in the region, employers do not pay adequate attention to damages resulting from drug abuse. In order to identify cases and their treatment at work place, random drug tests for employees should be used. Addiction tests at work place were used in the USA in 90% of factories with above 5000 workers (19). Random tests are applied as deterrents both for regular and occasional use of illegal drugs (18). Promotion of test implementation plan at work places and more adaptation of test results based on individual report are the daily topics (20, 21). Performing addiction tests at work places significantly lead to saving costs. In a sectional study conducted in the USA, it was specified that a company saves more than 100 million dollars on average per year in recruitment of forces after performing addiction tests (19).

Taking into account countries' experiences published in the current decade, it was observed that work place plans have been shifted towards health promotion collective plans at work place (22). The study by Damari et al. concerning evaluation of addiction prevention plans at work places indicated that the major achievements of these plans in the view of subjects were increased awareness and sensitivity in employees and employers towards addiction (23).

Despite the great efforts and the implementation of at least 30 interventions in the region over the last decade, all have been often sectional, insular, inconsistent, and immeasurable in terms of impact. The current study suggests some interventions and specifies contribution of respective organizations in taking part towards eliminating the problem. According to opinions of stakeholders in this study, triangle of local governance, oil industry, and people of PSEEZ geographic scope have serious contradictions. To this matter, there is no planned discourse for eliminating the problem. Unlike the previous plans, in the current plan, participation of different stakeholders has been approved based on 3 vertices of triangle in the form of a MoU, and a secretariat was formed to monitor commitment of parties with formal announcement of the Head of Iran Drug Control Headquarters. In addition,

specific indexes were defined for monitoring and evaluating the success of the plan.

One of the limitations of the study was lack of accuracy in the study in estimating prevalence of addiction in Pars special economic energy zone. Therefore, monitoring and evaluating addiction prevalence and reduction interventions are difficult.

Formulating therapeutic interventions for addicts was not among the research goals. However, addiction prevalence reduction in PSEEZ depends on simultaneous implementation of interventions to "identify cases and treat them".

All selected experts and stakeholders participated in the interview and there were no dropouts. So the finding of this study could be generalized to the whole region. The results of this study have communicated in the form of the comprehensive primary prevention of addiction document No. 18/1574699 dated March 12, 2014 by the Iranian drug control headquarters.

Considering the high prevalence of addiction in PSEEZ and its effects, and results of implementing multilevel interventions observed in the current study, it is necessary to immediately implement simultaneous national interventions. This will help improve the economic, social, political, technological, international, and environmental conditions.

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Footnotes

Authors' Contribution: Study concept and design: Behzad Damari; Acquisition of data: Golamreza Bostanmanesh; Analysis and interpretation of data: Mahin Ahmadi Pishkuhi; Drafting of the manuscript: Behzad Damari, Irvan Masoudiasl; Critical revision of the manuscript for important intellectual content: Behzad Damari; Statistical analysis: Mahin Ahmadi and Golamreza Bostanmanesh; Administrative, technical, and material support: Behzad Damari and Irvan Masoudiasl; Study supervision: Behzad Damari.

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