



Research Paper

Advertising representation, treatment menu and economic circulation of substance misuse treatment centers in Iran: A rapid survey based on newspaper advertisements

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ABSTRACT

Background: Daily newspapers are the main platform by which substance misuse treatment (SMT) centers in Iran advertise their services. However, these advertisements provide little information on treatment options or costs. The current research aimed to use advertisements to compile a schema of treatment services and to map the extent and nature of drug treatments offered.

Methods: During a four-week period (April to May) in 2009, the four most popular Persian newspapers printed in Tehran were reviewed. Across these publications 1704 advertisements were posted by 66 SMT centers. Each center was then contacted by telephone to complete a structured interview about services offered and related costs. The advertisements were also decoded through a quantitative contextual analysis method.

Results: On average, each SMT center published 26 advertisements during the review period, costing 421 US\$. In addition, advertisements included word signifiers in six main categories including centers' introduction (100%), treatment types (91%), treatment duration (68%), medicines (70%), treatment features (60%) and psychological facilities (52%). The three detoxification programs advertised were the rapid method (57% of clinics, 443.23 US\$), buprenorphine (68%, 265 US\$) and methadone (71%, 137 US\$). More than 90% of the centers in Tehran were offering methadone maintenance (99 US\$, per month).

Conclusion: SMT services in the Iranian market ranged from abstinence to maintenance programs, with opiates as the main focus. This review of centers' advertisements provides an indirect but rapidly obtained picture of the drug misuse treatment network.

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Background

Substance misuse treatment network in Iran

According to the official statistics, over the past 60 years, the number of problem drug users in Iran has ranged between one and two million. One report, for instance, states that there were 1.3 million people misusing opium by 1949 (McCoy, 1991). Sixty years later in 2009, the Iranian Drug Control Headquarters reported the number as 1.2 million, comprising 62,400 females and 1,137,600 males. The United Nations Office for Drug Control (UNODC) has

estimated that 0.7–1.6 million Iranians misuse drugs (UN Drug Report, 2009), while Iran's Ministry of Health (MOH) asserts that there are about 1.7 million problematic drug users as well as 1.8 million occasional or casual users (Mokri & Schottenfeld, 2008). In addition, the latest rapid assessment study on drug misuse in Iran (2007) found evidence that a range of substances were being misused, including opium (34%), crystalline heroin (27.1%), heroin (19.2%), methamphetamine (3.6) and cannabis (2%) (RSA Report, 2007).

The MOH database (reviewed in summer 2008) showed that there were 1438 SMT centers across Iran, which had provided drug cessation-related treatment to 642,516 clients. Of those, 85% (1232) belonged to the private sector, although they required the state's permission to operate. In Tehran province there were 262 SMT centers with a combined staff of 746, including medical doctors (239), psychiatrists (61), nurses (138), social workers (79), and psychologists (229). These SMT centers comprised of 250 non-governmental and 12 governmental organizations of which 78% were authorized

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	<p>Dr. Shabani's Addiction Treatment Center Substance Abuse Treatment Center Officially authorized by the Ministry of Health Services: MMT, BMT, Detoxification, Psychotherapy, Relapse prevention, Social work, Group therapy, Psychiatrist's consultation Governmental rate (convenient payment terms) Address Office Telephone number, Cell phone number</p>
	<p>Rose Specialty Group In-patient and out-patient treatment Reimbursed by insurance Rapid and gradual detoxification Methadone, Buprenorphine, Naltrexone Office telephone numbers of two related centers</p>
	<p>Pardis Specialized Addiction Treatment Center Substance Abuse Treatment Center Physician's name Rapid Detoxification (RD) (In-patient, Out-patient), Under supervision of National Social Welfare Organization, 30 Bed capacity website address Postal address Office telephone number, Cell phone number</p>
	<p>Comprehensive Treatment for Drug Addiction Relapse free 24 hour- working time Guaranteed lowest cost, Get clear and stay clear! Special Premium Office telephone number, Cell phone number City zone</p>

Fig. 1. Samples of substance misuse treatment centers' ads in Tehran newspapers and the related contents.

by the MOH and 22% by the Social Welfare Organization (MOH, Summer 2008).

Despite their number, there is little published data on the treatment options offered by SMT centers or the cost of those treatments and our study was designed, at least partly, to address this information deficit by tracking the centers through their newspapers advertisements.

Media representation of substance misuse treatment centers

Advertising has long been acknowledged as an influential tool of social control, used to broadcast information in mass media to persuade audiences (De Fleur & Denis, 1993) and promote a product, service, or event. Fig. 1 provides examples of advertisements for SMT centers run in the Iranian national press. In general, these contain at least six main elements, including the center's name, governmental certification, governmental rate, short introduction to treatment menu and some specific details such as the name of the lead physician and the contact details and website address of the center. As far as we know, this is the first study to collect more detailed information about treatment options and costs from SMT centers in Tehran by means of a review of newspaper advertisements and structured interviews with service providers.

Methods

Advertisements: collecting phase

The aim of the study was to use advertisements to compile a schema of treatment services and to map the extent and nature

of drug treatments offered and their costs. Four of the most popular Persian newspapers, Iran, Jame-e-Jam, Keyhan, and Hamshahri, were reviewed during a one month period (April 21–May 21, 2009; 25 working days) and all related advertisements were collected. The media permissions were obtained to use these advertisements as research material. Across these publications 1704 advertisements were posted by 66 SMT centers. These centers tended to run repeat advertisements in the same newspapers up to 25 times a month.

Advertisements: contextual analysis

Contextual analysis is a systematic, objective, and quantitative method to analyze communicative issues (Riffe, Lacy, & Fico, 2005). This method was employed to analyze the selected advertisements in three phases. Firstly, the main concepts (as discussed above) were drawn from the advertisements. Secondly, contents were categorized based on the basic concepts to understand quantitative values of these indicators and finally the role of the advertisements in the drug treatment process was analyzed.

Telephone interviews

The third phase of the research involved completing a structured telephone interview with staff from each of the 66 SMT centers. This method was reviewed and received ethical approval from the Iranian National Center for Addiction Studies, Tehran University of Medical Sciences.

The interview questions were as follows:

- MMT: “Are you prescribing methadone maintenance treatment (MMT) for your patients?” In the case of a positive answer, they were asked: “How much does the MMT package, including the medicines, urine analysis (UA), and consultation, cost in your center?”
- MD: “Do you apply methadone detoxification (MD) for patients in the center?” In the case of a positive answer, they were asked: “What is the dose for MD used in your treatment center?”; “How much does this cost for each patient?”
- BD: “Is a buprenorphine detoxification (BD) program also offered in your center?” In the case of a positive answer, they were asked: “What dose for BD is used in your treatment center?”; “How much does the full BD package, including the medicines, UA, and consultation, cost in your treatment center?”
- RD: “Do you ever provide clients with rapid or ultra-rapid detoxification (RD) in your center?” In the case of a positive answer, they were asked: “What are the RD features (RD length, admission duration, etc.) in your center?”; “How much does the complete RD package, including the medicine, UA and consultation, cost in your center?”
- NM: “Do you suggest naltrexone treatment for patients in your center?” In the case of a positive answer, they were asked: “Are you using just naltrexone capsules in your recovery program or do you also offer naltrexone implants?”; “How much do the capsules or implants cost in the center?”

Because there is a significant gap between formal and actual price rates of substance misuse treatment services, the SMT centers directors and staff are cautious in declaring their prices. For this reason when conducting the interviews and collecting the financial information, the researcher pretended to be a potential client. Telephone interviews were mainly completed with secretaries, physicians or managers. The language used to ask the questions, noted above, may have varied from these exact statements depending on the course of the conversation. However, at the end of each telephone interview the researcher had to disclose that the questions were part of an academic research project and that the name of their center together with personal information would remain confidential. Although the option was offered, no center asked to be omitted from the study.

Results

According to our results, SMT centers tend to pay great attention to how they are represented in advertisements. As such, they publish 25.81 (± 31.37) adverts in one month, costing 421.28 (± 50.6) US Dollars (4,465,660 Rial).

Introducing the center

The centers commonly included five features in their advertisements: the center's brand information, the team, facilities, state permission sources, and some payment terms.

Upon introduction, the main focus of attention was paid to branding information. All the advertisements included the name and contact information of the center, and a third highlighted the name of the physician as the next important element in the branding process.

Over a third (38%) of the centers, highlighted their governmental permission to operate; 31% cited the MOH as the authorizing party and only 7% of the centers mentioned the National Social Welfare organization.

The SMT centers represented themselves through their specialist facilities and the various benefits they promised. Just under one-third referred to their center as “specialized” for having proficiency in substance misuse treatment. Only 10% mentioned their working hours. A minority noted the contribution of multidisciplinary teams to attract their potential clientele, including the contribution from psychiatrists (mentioned in 6%) and social workers (mentioned in 3%). While several centers claimed to offer “psychological services”, the term of “psychologist” was not mentioned in their advertisement, as indicated in Table 1.

Treatment types

The two main types of substance misuse treatments promoted, appearing in 91% of advertisements, were detoxification, and maintenance. While detoxification was the most commonly offered treatment method, mentioned by 66% of centers, only one center referred to “general anesthesia” (for ultra-rapid detoxification) as a method of detoxification. Maintenance treatment was the second most popular treatment, mentioned by a quarter of the centers.

Treatment duration

Six terms were used to define treatment duration and this was mentioned by 68% of the advertisers. The discussion of treatment duration could be divided into two groups. The first group emphasized a lengthy period of treatment by using two codes, gradual (12%) and long term (8%). In comparison, four codes appeared in the second group, highlighting more speedy treatment. These included short term (6%), rapid (15%), ultra-rapid (3%), and just a single day (1%). In general the adverts tended to highlight short-term (25%), although the long-term treatment programs retained their position (20%).

Treatment features

Several codes were used to define the centers' treatment features. These were: treatment setting (23%), treatment advantages (7%) and post treatment services and outcomes (31%). Meanwhile, only three centers reassured their audience about the lack of pain, discomfort or side effects of the treatment processes they were offering. Of note, over 30% promoted their post treatment services as the most important item. With regard to the above, 6% mentioned their follow up procedures and 9% highlighted their rehabilitation facilities, while the most commonly mentioned item was relapse prevention (17%).

Psychological facilities

Over half of the (52%) SMT centers introduced their psychological team and facilities. Two thirds of the advertisers employed general codes such as consultation (28%) and psychotherapy (14%) and 10% applied two more detailed terms of group therapy (8%) and couple therapy (2%). This suggests a growing role for psychology in the drug misuse treatment market, including its importance for patients' recovery in SMT centers.

Medicines

SMT centers have an exclusive “opioid agonist dispensing” role in Iran. Over 70% of these centers included dispensation of these agents in their advertisements. In general three drugs, including methadone, buprenorphine and naltrexone were mentioned. Meanwhile, methadone was the most indicated medication for treatment (mentioned in 39% of the ads), followed by buprenorphine (27%). One center claimed to offer “new drugs” for the

Table 1
SAT centers' features, treatment characteristics and duration represented in the ads – reported as frequency (%).

Brand information			Clinical team		Center facilities		Financial issues		Permission source	
Center name	Physician name	Contact info	Social workers activity	Psychiatrist activity	Specialized services	24 h-working time	Insurance	Price rate	Social welfare	Ministry of health
66 (100)	22 (33)	66 (100)	2 (3)	4 (6)	19 (28)	7 (10)	5 (7)	11 (16)	8 (7)	21 (31)
Treatment setting			Treatment advantages			Post-treatment facilities				
In-patient	Out-patient	Without side effects	Without pain	Without withdrawal	Follow up	Rehabilitation	Relapse prevention	Without return		
7 (10)	9 (13)	1 (2)	2 (3)	1 (2)	4 (6)	6 (9)	6 (9)	4 (6)		
Long term treatment (20%)					Short term treatment (25%)					
Gradual		Long term	Short term		Rapid	Ultra rapid		Just one day		
8 (12)		5 (8)	4 (6)		10 (15)	2 (3)		1 (1)		

Table 2
Availability and cost of methadone maintenance and detoxification, buprenorphine, rapid and ultra rapid detoxification programs in the centers ($n = 66$) – reported as average (\pm SD)/frequency (%).

Methadone maintenance treatment				Methadone detoxification treatment				
MMT facilities	Drug test and consultation cost (months)	MMT all costs (months)		Methadone detoxification facilities	Dose dependent costs		MD all cost (months)	
42 (89)	40.20 US\$ (\pm 12.64)	98.85 US\$ (\pm 23.36)		47 (71)	13 (27)		129.71 US\$ (\pm 84.05)	
Buprenorphine detoxification				Rapid or ultra rapid detoxification (RD)				
BD facilities	Dose dependent costs	Free consultation	BD all costs (months)	RD/URD facilities	RD length (h)	RD admission length (days)	RD average all costs	Inpatient/after service duration (days)
45 (68)	11 (24)	45 (100)	249.88 US\$ (\pm 76.14)	38 (57)	5.17 (\pm 1.41)	3.64 (\pm 4.7)	443.23 US\$ (\pm 149.47)	5.91 (\pm 2.92)

Table 3
Availability of substance misuse treatment services and their costs (per month) in the centers ($n = 66$).

Treatment menu	Naltrexone capsule maintenance	Methadone maintenance	Naltrexone implant	Methadone detoxification	Buprenorphine detoxification	Rapid/ultra rapid detoxification (all costs)
Average price	20.12 US\$	98.85 US\$	122.20 US\$	129.71 US\$	249.88 US\$	443.23 US\$
Availability	34%	89%	27%	71%	68%	57%

treatment of substance misuse with no additional comment on what these treatments were.

Results of the telephone interviews

Naltrexone treatment

The day after the advertisements were posted, we contacted the corresponding centers by telephone in order to obtain more detailed information regarding their treatments and services. These interviews revealed that about 30 centers (45%) were offering naltrexone treatment as capsules (11 clinics), implants (6 clinics), and both (13 clinics). If accepted as an independent intervention, maintenance therapy with naltrexone capsules was found to be the least expensive treatment for opiate dependence in Iran. However, when medicine is applied, such as implant pellets, the cost rose to almost six times more than the capsule form. In other words, when prescribing naltrexone in capsule form, the cost is almost 20.12 US\$ (± 6.16) per month and the implant costs 129.53 US\$ (± 48.35) per month. Normally, clients would pay for two or three months and the cost would rise based on duration of naltrexone implant.

Methadone treatment

More than 70% of the centers offered methadone detoxification treatment programs, whereas almost 90% offered a MMT package. This long-term maintenance costs about 99 US\$ per month, including about 40 US\$ for the drug tests (UA) as well as consultation services.

Generally the cost of the substance exceeded that of the medicine and physician fees. As such, the average costs for MMT, and other treatment programs, included maintenance charges and confirmatory evaluations such as additional UA tests costing around 5.96 US\$ ($SD = 2.75$) each, plus the cost of consultation which was about 13.63 US\$ ($SD = 8.47$) per hour.

More than two-thirds of the centers offered MD services, most of which had a fixed defined cost for methadone dose. For such a treatment, each patient was required to pay a monthly charge of 129.71 US\$, on average. The treatment protocol normally takes a month to complete.

Rapid detoxification

As demonstrated in Table 2, detoxification was the most commonly offered treatment in the advertisements. Over half (57%) of the centers promoted rapid detoxification, claiming to apply such treatment in an average of 5.17 h. To undergo RD, patients were hospitalized for 3.64 days and followed up for an average of 5.91 months in an outpatient setting. Yet despite its availability, the low success rate reported for RD has meant there is little support from the MOH for its use. Further, this treatment program is known to be the most expensive SMT in the Iranian market, with an average charge of 443.23 US\$ to undergo the protocol.

Buprenorphine detoxification

Buprenorphine detoxification was also widely accessible in SMT centers across Tehran (available in almost 70% of centers). BD was the only locally approved detoxification service over the period of our study as MD had been prohibited by MOH regulations due to several unpublished reports indicating high relapse rates. Meanwhile, the cost of BD (250 US\$) was twice as high as MD.

Discussion

In the drug misuse treatment market, the newspaper advertisement is a powerful non-governmental medium used to link clinics, media and the patient as customer. The competition in the treatment market means that the SMT centers' promotional activities are crucial. The centers appear to opt for accessibility, publicity range, and popularity when determining their advertising medium of choice.

According to our findings, SMT centers introduced themselves through their brand information, team, facilities, state permission, and costs as well as providing information about type and length of treatments offered, recovery time, post-treatment issues and psychological facilities available.

However, there were some discrepancies between the advertisements and key features described in the MOH statistics. The latter presented data showing that the executive team in SMT centers included a physician (91% of the centers), a psychologist (87%), a nurse (53%), a social worker (30%) and a psychiatrist (23%) (MOH Report, Summer 2008). The proportion reporting the employment of these professionals was much lower in the advertisements: physician (33% of the centers), psychologist (0%), nurse (0%), social worker (3%) and psychiatrist (6%) (Table 3).

The SMT market in Iran is most focused on problem use of opiates and offers almost all internationally approved treatment options for opiate dependence. Methadone and buprenorphine are widely offered for maintenance and detoxification. Despite recent concerns about the emergence of methamphetamine misuse, there were no advertisements for the treatment of stimulant misuse during our period of review in 2009. Given the recent surge in methamphetamine misuse (Shariatirad, Maarefvand, & Ekhtiari, 2013; Yoonssi & Ekhtiari, 2013), a new survey using these methods could provide some insight into the emergence of any such treatments.

SMT services range for abstinence-based to maintenance programs. Rapid detoxification is the most expensive method (443 US\$ in average). The methadone maintenance program is the least expensive method, costing about 98 US\$ per month. Detoxifications with methadone costs around 130 US\$ and detoxification with buprenorphine costs twice as much, i.e. 250\$.

The naltrexone capsule-included regimen, despite being cheap, is not popular in Iran and this is perhaps related to low rates of adherence and compliance with this treatment. Our local situation is in line with the international reports on low long-term retention on this drug (George & Ekhtiari, 2010). There are, however, new hopes for naltrexone implants and long acting injections to improve patient compliance. Detoxification with clonidine has been a common treatment for opiate dependence in Iran since 1998 (authors personal experience), nevertheless this seems to have been usurped by competition from MD and BD.

As has been shown above, a treatments' availability is related to its cost. For instance, MMT which is the most accessible treatment (90%) is also the least expensive. On the other hand, RD and UROD (rapid and ultra-rapid opioid detoxification), although illegal, are offered by 57% of the medical centers and are known to be the most expensive treatments on the market. This cost might be explained through supply and demand economic model. Hence, detoxification services were mentioned three times as frequently

as maintenance treatments in the advertisements, and the revenue from only one rapid detoxification would more than cover the center's advertising costs of publishing 26 newspaper advertisements in a single month. The increasing tendency for clients towards to opt for short-term, rapid acting treatments may reflect the negative stigma of problem drug use and its treatment as well as the lack of public awareness and knowledge regarding the effectiveness of the so-called rapid addiction treatment programs in Iran.

Conclusion

This investigation is the first of its kind to use the SMT centers' advertisements as an indirect data source to gain a general picture of the drug misuse treatment market in Iran. This method allows us to build a map of the treatment market and may be useful for trend monitoring with prospective data collection phases. It is limited in so far as advertising is a promotional activity for the mass media and as such may provide a less than realistic picture. However because of the lack of reliable published data regarding drug misuse (and its treatment) within the Middle East and North Africa (MENA region), these data will be helpful for both researchers and policy makers to have a better understanding of policy, media, and economic issues within the drug misuse treatment market in Iran. This manuscript is part of a long-term longitudinal study to evaluate market trends in the substance misuse treatment network in Iran. We are working now on the second phase to evaluate trends from 2009 to 2013, and hope to be able to report our results soon.

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Conflict of interest

Authors declare no conflict of interests.

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