Evaluation of Drug-Abuse Treatment Based on the Continuous Quality Improvement Concept

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Abstract

At least 1.2 million Thai people are now addicted to drugs and more varied dangerous substances are entering Thailand. The objective of this study was to evaluate drug-abuse treatment based on the continuous quality improvement concept.

A cross-sectional survey was conducted by using a questionnaire developed with the reliability of 0.8842. Respondents included 188 hospital directors from drug-abuse clinics situated all over the country, 33 service-providers and 305 clients, attending 3 governmental drug-abuse clinics and 1 private clinic in Bangkok.

The results showed a high response rate, 77.1-100.0 per cent. The clients' satisfaction level was high and significantly associated with clinic visits, the expected outcome of stopping alcohol-drinking and completion of six-week detoxification treatment without significant association with stopping drug-use. The significant variables associated with clients' satisfaction were : clean and pleasant environment of the clinics, warm welcome to everybody, listening to clients without signs of being bored, difficult problems that occurring should be solved immediately and properly, clients' parents and relatives should receive appropriate counseling, and clients' co-illnesses should be also treated. Hospital directors and service providers' opinions on CQI-based drug-abuse treatment were not significantly different. The study raised quality awareness and further action on CQI was recommended for effective and efficient drug-abuse treatment.

Key word : Evaluation, Drug-Abuse Treatment, Continuous-Quality-Improvement

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One hundred and eighty-five nations attended the UN General Assembly Special Session on the World Drug Problem in New York from June 8 to 10, 1998. There are 190 million people worldwide using illicit drugs[1]. The old model of producer-transit-consumer no longer describes the actual nature of the drug threat. Demand and supply of drugs should be worked out at the same time. If there is a priority, it must clearly be the demand for reduction[2]. The demand for drugs should be reduced by half over the next decade through prevention and treatment programs[3].

It is estimated that at least 1.2 million Thai people are now addicted to drugs, but only 850,000 Thais were addicted 10 years ago. The harder the Narcotics Suppression Bureau's policemen fight against dangerous drugs, the more varied the dangerous substances are that enter Thailand. Drug-use is not simply to satisfy personal habits, but also for financial purposes and many other drug-related crimes[4].

The objective of this study was to evaluate drug-abuse treatment by hospital directors, service providers and clients based on the continuous quality improvement concept.

MATERIAL AND METHOD

A cross-sectional survey was carried out of all hospital directors who provide drug-abuse clinic, including 188 hospitals (government 159, private 29). Four drug-abuse clinics in Bangkok which are under 3 different ministries (Ministries of Public Health, Interior, and Defence) and one private clinic, were selected including 33 service-providers and 305 clients. A questionnaire was developed with a reliability of 0.8842 and the survey was conducted from June to September, 1996.

Descriptive and analytical statistics were computed by using a SPSS/PC. Analysis of variance for the 3 group's mean difference, the 2 group's mean difference by a Student Newman Keuls Test. The Chi-square test, *t*-test, and Pearson Product Moment Correlation Coefficient test were also used.

RESULTS

The response rate of the hospital directors was 77.1 per cent, service-providers 100.0 per cent and clients 100.0 per cent. Most of the hospital directors were aged over 30 years, service-providers 30-40 years and clients under 40 years.

The clients' occupations ranking from high to low were : workers 36.1 per cent, students 21.3 per cent, traders 13.1 per cent, state enterprises' employees 8.9 per cent, government officers 2.6 per cent, business employers 2.0 per cent, farmers 1.0 per cent and unemployed 15.0 per cent.

Most of the clients were single (68.2%), had compulsory education (42.6%), and a regular income (53.8%), which averaged less than 7,500 baht per month.

The highest type of drug-use was heroin (62.9%), followed by morphine 25.9 per cent, inhalant 4.6 per cent, morphine and heroin 4.3 per cent, inhalant and heroin 0.3 per cent, alcohol 0.3 per cent, others 1.6 per cent.

Clients spent an average of 273 baht on drugs and 459 baht on treatment per day.

The average clinic visits were 3 times. Clients' expected outcomes of drug-abuse treatment were :

- Stopping drug-use 96.4 per cent,
- Stopping alcohol-drinking 10.5 per cent,
- Continuity of work 92.5 per cent,
- Completion of 6-week detoxification treatment 71.5 per cent, and
- Further rehabilitation treatment 41.0 per cent.

Client's satisfaction level on the clinic site was 4.4 ± 0.7 (maximum score 5), and on the pleasant environment 4.5 ± 0.6.

The association between the number of clinic-visits, clinic sites and the pleasant environment was significant (p-value = 0.00372), and between the number of clinic-visits and service process was also significant (p-value = 0.00146). There was also a significant association between the number of clinic-visits with the following expected outcome : stopping alcohol-drinking, continuity of work, completion of 6-week detoxification treatment, further rehabilitation treatment, except stopping drug-use, (p-value < 0.05), but there was no significant association between number of clinic-visits and clients' educational level (p-value > 0.05).

The clients' satisfaction level was significantly associated with both the expected outcome of stopping alcohol-drinking (p-value = 0.048) and completion of the 6-week detoxification treatment (p-value = 0.019), but insignificantly associated with the expected outcome of stopping drug-use (p-value = 0.513).

The clients' satisfaction level, hospital directors' opinion of importance and service-providers' opinion of importance showed significant difference among the 3 groups on the following 2 items:

- Service on-time, and
- No responsibility-shifting.

There were no significant differences among the 3 groups on the following 5 items:

- Counselling given and treatment process well-understood
- Motivation on stopping drug-use was given to clients,
- Clients were allowed to take drugs home,
- Friendly help was given whenever clients asked for it,
- Treatment price was reasonable.

The clients' satisfaction level was significantly different from the hospital directors' opinion of importance and from the service-providers' opinion of importance on the following 6 items:

- clean and pleasant environment of the clinic,
- warm welcome to everybody,
- listening to clients without being bored,
- problems that occurred were immediately and properly solved,
- clients' parents and relatives were also given appropriate counselling,
- clients' co-illnesses were also treated.

Hospital directors' and service-providers' opinion of importance were significantly different on the following 4 items:

- clinic site,
- service on-time,
- waiting time, and
- no responsibility-shifting.

The hospital directors and service providers' opinion of importance on the concept of CQI which included quality management 8 items, service skills training 5 items, convenient site and pleasant environment of the clinic 2 items, service process 13 items, and coordination among related treatment agencies 5 items, totalling 33 items, showed no significant difference. (Table 1):

The Pearson Product Moment Correlation Coefficient of 33 variables showed that hospital directors viewed "skills on analytical statistics" as the highest significant pairwise-correlation (p-value of 2 tail less than 0.01), while service-providers viewed "service on-time" as the highest significant correlation.

DISCUSSION

It is well accepted worldwide that the drug problem is borderless and no country can deal with it on its own. Drug-abuse treatment also involves a multiplicity of disciplines and evolving of new drugs and advancement of methodologies. Since 1990 the CQI (Continuous Quality Improvement) which is an ongoing effort to provide care that meets or exceeds the clients' expectation, has been accepted as a promising approach for increasing the value of improving the quality of care while containing costs[5]. The ineffectiveness and inefficiency and failure of drug-abuse treatment might be improved if CQI is applied in drug-abuse treatment.

This study showed that the clients had a high satisfaction level of drug-abuse treatment which was associated significantly with the number of clinic-visits and expected outcome of stopping alcohol-drinking, but associated insignificantly with the expected outcome of stopping drug-use. This might indicate that types of drug-use, time-in-treatment, clients' biologic, psychiatric and psychosocial variables, subjects of retention and its correlates, service providers and clients interaction, and many others, should receive more thorough consideration. CQI is one of the means to achieve quality service improvement and effective treatment outcome. Service on-time and no responsibility-shifting needs to be improved, including clean and pleasant environment, a warm welcome to everybody, listening to clients without signs of being bored, difficult problems if occurring should be immediately and properly solved, clients' parents and relatives should receive appropriate counselling, and clients' co-illnesses should also be treated.

Service providers' opinion of importance on clinic sites, service on-time, waiting time and no responsibility-shifting were significantly higher than those of the hospital directors, because these services are their direct responsibility. Continuous corrective actions will improve the quality of service and treatment outcome of drug-abuse.

The statistics of drug arrests and seizure from January to December 1997 of the Narcotics Suppression Bureau showed that the highest number of cases arrested, used amphetamines, followed by dry and fresh marijuana, inhalants, heroin, opium,

Table 1. Mean difference between the (144) hospital directors' and (33) service providers opinion of importance on Continuous Quality Improvement concept.

Concept	Group	Mean	Standard deviation	t-test	p-value
I Quality management					
1. Hospital directors should lead the policy and support quality service, actively.	Hospital directors	4.40	0.76	-1.94	0.054
	Service providers	4.67	0.60		
2. HD should decentralize and monitor service process.	HD	4.45	0.64	0.70	0.487
	SP	4.36	0.82		
3. Clients' requirement should be the focus of service improvement.	HD	4.02	0.79	-1.67	0.096
	SP	4.27	0.76		
4. Service providers' requirement should be the focus of service improvement	HD	1.78	0.72	0.57	0.572
	SP	1.70	0.88		
5. Rewards and promotion system should be based on clients' outcome.	HD	1.78	0.72	0.57	0.372
	SP	1.09	0.88		
6. Rewards and promotion system should be based on work load.	HD	3.39	0.99	0.11	0.909
	SP	3.36			
7. Service improvement was a continuous process, no ending.	HD	4.41	0.68	0.70	0.486
	SP	4.33	0.59		
8. Treatment prices should be reasonable.	HD	3.89	0.92	0.89	0.381
	SP	3.67	1.41		
II. Service skills training on:					
1. Service process	HD	4.35	0.63	1.17	0.095
	SP	4.07	0.84		
2. Communication	HD	4.32	0.65	-0.57	0.568
	SP	4.40	0.72		
3. System approach on problem-solving	HD	4.24	0.70	-0.96	0.339
	SP	4.38	0.78		
4. Necessary statistics	HD	3.92	0.77	-0.40	0.691
	SP	4.00	1.05		
5. Specialized capabilities	HD	4.09	0.83	-1.19	0.235
	SP	4.31	0.84		
6. Others.	HD	3.77	0.75	-1.74	0.084
	SP	4.25	0.71		
III. Coordinating among drug-addiction treatment agencies concerned.	HD	20.17	2.95	-1.81	0.072
	SP	21.21	3.19		

katom, chemical substances, ecstacy, morphine, cocaine and others, which confirmed the entry of a significant number of more dangerous drugs, more cases of girls and boys being rescued from brothels after being forced into drug addiction, and the use of drugs to lure young men to instigate "political unrest"[4].

This study revealed that clients spent more money on treatment than on drugs (459 *vs* 273 baht) per day. From the report of studies of CQI adoption both in business and health services, especially the most comprehensive study of 20 organizations conducted by the U.S. General Accounting Office showed moderate but consistant cost savings, employee relations, productivity, customer satisfaction, market-sharing and profitability[6]. Another study also showed that the switch from a price-based approach to the more comprehensive CQI approach resulted in lower costs, improved communication with suppliers, and a better understanding of suppliers' processes and internal requirements[7]. The lower price of the drug-abuse treatment might help

to decrease the client's financial constraints, who need many stages of treatment (detoxication, resocialization and follow-up stages) to be successfully recovered (abstinence from drug taking, stable vocation and committing no crime). CQI frame work involves cultural, technical, strategic and structural dimension[8]. The cultural dimension refers to the underlying beliefs, values, norms and behavior of the organization that support or serve as a barrier to organization-wide improvement, e.g., employee empowerment. The technical dimension refers to the extent to which employees have received relevant training in CQI tools e.g. cause and effect diagrams, process flow charts, histograms, statistical process, control charts, information system, and data analysis capability. The strategic dimension refers to the extent to which the organization's quality improvement efforts are focused on key strategic priorities and the organization's overall strategic plan. The structural dimension refers to the specific organizational entities, e.g. coordinating committees, task forces, work groups and reporting/accountability mechanisms used in the organization's quality improvement efforts. The structural component brings together all dimensions' efforts and serves as a forum in which these dimensions interact. This study included 33 variables based on the CQI concept of which both hospital directors and service providers showed no significant difference or had any conflicts, so it would not be too difficult to develop CQI-based drug-abuse treatment. A major barrier to a generally favorable impact of CQI which was reported from a study of Fortune, 1,000 cooperations, was the cultural inability of the firm to move fast enough in implementing CQI to have overall organization impact[9,10]. It was interesting that hospital directors in this study viewed "skills in analytical statistics", and service providers viewed "service on-time", as the highest significant correlation of all 33 CQI-variables (Pearson Product Moment Correlation Coefficient-data not shown).

From the report of the Research Institute for National Development which collected data of drug addicts by the key informant system survey on December 31, 1993, revealed that six out of eleven alleged drug users in 4 police stations had never been under treatment, and those who had been under treatment did not stop drug-use. The influential causes of repeated drug-abuse were their familial problems and their drug-addicted friends. Another group of eleven prisoners who were drug addicts, showed the same findings as that of the allegeds at the police station. The third group was 8 patients receiving detoxification treatment at one of the clinics in this study. All were male, aged 15-37 years and had used heroin. Their occupations varied from civil servants (2), wage earners (2), students (3), and unemployed (1). The causes of drug addiction were the same, broken homes and peer pressure. They had weak personalities and reused drugs after treatment. The fourth group was 9 patients receiving treatment at private clinics. Their highest level of education was equivalent to secondary school, and were traders. Their economic status was better than the other groups of drug-addicts, no familial problems, but were addicted because of peer pressure and availability of drugs on the market. The type of drug-use of the aforementioned groups was heroin. The fifth group was 19 students, aged 14-29 years who used morphine, heroin and solvent. Five of the 19 students had received drug-abuse treatment. The reason for drug-reuse was being in the same environment and peer pressure. Other groups of drug addicts included slum-dwellers, prostitutes, wage-earners, etc. The first type of drug-use started with cigarette-smoking alcohol-drinking, taking sleeping pills, followed by morphine, heroin powder, then injection. Some started with solvent-inhalation, followed by morphine[11]. This study confirmed the finding of no expected outcome of clients' stopping drug-use, and indicated the necessity of quality treatment, coordination among agencies concerned and law enforcement.

SUMMARY

The survey of 188 hospital directors, 33 service providers and 305 clients related to quality drug-abuse treatment, both government and a private clinic showed that clients' satisfaction level was high but not significantly associated with the expected outcome of stopping drug-use. The significant variables related to satisfaction and which should be improved were: a clinic which should be pleasant and convenient for the clients, giving a warm welcome to everybody, service providers should listen to clients without signs of being bored,

difficult problems if occurring should be solved immediately and properly, clients' parents and relatives should receive appropriate counselling, and clients' co-illnesses should also be treated. Hospital directors' and service providers' opinion on CQI was not significantly different.

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REFERENCES

1. Bangkok Post. Opinion and Analysis. The fight for a drug-free zone 1998; June 8: 10.
2. Bangkok Post. Global viewpoint on drug fight must target demand, not just supply 1998; June 14: 5.
3. Bangkok Post. Home. UN New York Times. 2 Pronged strategy proposed new plan to fight drug trafficking 1998; June 8: 2.
4. Bangkok Post. Perspective. A never-ending story 1998; June 28: 1.
5. Kaluzny AD, McLaughlin CP, Kibbe DC. Quality Improvement in the clinical setting: enhancing adoption. Quality Management in Health Care 1992; 1: 37-44.
6. U.S General Accounting Office. Management paractices: U.S. Companies improve performance through quality efforts. GAO/NSIAD-91-190. Washington, D.C.: Government Printing Office, 1991.
7. Giunipero LC, Brewer DJ. Performance-based evaluation systems under Total Quality Management. International J of Purchasing and Materials Management 1993; Winter: 35-41.
8. O'Brien JL, Shortell SM, Hughes EFX, et al. The pyramid of Continuous Quality Improvement: An integrative model for organization effectiveness. Quality Management in Health Care 1995; March.
9. Arthur D Little. Survey of 500 institutions. Boston: Arthur D Little, 1992.
10. Lawler EE, Mohrman SA III, Ledford GE Jr. Employee involvement and Total Quality Improvement: San Francisco: Jossey-Bass, 1992.
11. Research Institute for National Development. A report study of the number of drug addicts in Thailand. November 14, 1994: 35-53.

การประเมินผลการรักษาผู้ป่วยติดยาเสพติดตามแนวคิดการพัฒนาคุณภาพอย่างต่อเนื่อง

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ปัจจุบันชาวไทยอย่างน้อย 1.2 ล้านคน ติดยาเสพติด และสารเสพติดชนิดร้ายแรงต่างๆ ได้ถูกนำเข้าประเทศมากขึ้น วัตถุประสงค์ของการวิจัยนี้ เพื่อประเมินผลการรักษาผู้ป่วยติดยาเสพติด ตามแนวคิดการพัฒนาคุณภาพอย่างต่อเนื่อง

การประเมินผลการรักษาผู้ป่วยนี้ใช้วิธีการสำรวจโดยการใช้แบบสอบถามที่สร้างขึ้น ซึ่งมีค่าความเชื่อถือได้ 0.8842 ตัวอย่างการวิจัย ประกอบด้วยผู้อำนวยการโรงพยาบาลทั่วประเทศที่มีคลินิกยาเสพติด จำนวน 188 คน ผู้ให้บริการและผู้ป่วย จำนวน 33 และ 305 คน ตามลำดับ ใน 3 คลินิกสังกัด 3 กระทรวง (สาธารณสุข, มหาดไทย และกลาโหม) และคลินิกเอกชนรวมเป็น 4 แห่ง ที่ตั้งอยู่ในกรุงเทพมหานคร

ผลการวิจัย พบว่า ความร่วมมือในการตอบแบบสอบถามสูง (77.1–100%) ผู้ป่วยมีระดับความพึงพอใจต่อการรับบริการสูง และสัมพันธ์อย่างมีนัยสำคัญกับจำนวนครั้งที่มารับบริการ, กับการคาดหวังในการหยุดดื่มสุรา และการรับบริการครบ 6 สัปดาห์ แต่มีความสัมพันธ์อย่างไม่มีนัยสำคัญกับความคาดหวังในการหยุดการใช้ยาเสพติด ปัจจัยที่มีความสัมพันธ์กับระดับความพึงพอใจของผู้ป่วย ได้แก่ การจัดคลินิกให้สะดวกและสบายร่มรื่น ผู้ป่วยได้รับการต้อนรับดีอย่างเท่าเทียมกัน ผู้ให้บริการรับฟังผู้ป่วยโดยไม่แสดงอาการเบื่อหน่าย เมื่อมีปัญหายากลำบากเกิดขึ้นผู้ให้บริการสามารถแก้ไขได้ทันทีและเหมาะสม พ่อแม่และญาติของผู้ป่วยได้รับคำปรึกษาเพื่อช่วยผู้ป่วยอย่างเหมาะสม และโรคอื่นๆ ของผู้ป่วยที่เป็นอยู่ได้รับการรักษาพร้อมไปด้วย ทั้งผู้อำนวยการโรง พยาบาลและผู้ให้บริการมีความคิดเห็นเกี่ยวกับการรักษาผู้ป่วยติดยาเสพติด ตามแนวคิดการพัฒนาคุณภาพอย่างต่อเนื่อง 33 ปัจจัยไม่แตกต่างกัน (p–value > 0.01) การวิจัยนี้ช่วยกระตุ้นให้ตระหนักถึงความสำคัญของการบริการการรักษาผู้ป่วยติดยาเสพติดแบบมีคุณภาพ และควรส่งเสริมและสนับสนุนให้มีการพัฒนาคุณภาพอย่างต่อเนื่องต่อไป

คำสำคัญ : การประเมินผล, การรักษา ยาเสพติด, การพัฒนาคุณภาพอย่างต่อเนื่อง

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